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**ANDERSON'S**

**QUARTERLY JOURNAL**

**OF THE**

**MEDICAL SCIENCES.**

**BEING A NEW SERIES OF**

**THE QUARTERLY JOURNAL OF FOREIGN MEDICINE**

**AND SURGERY.**

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**VOL. II.**

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**LONDON:**

**PRINTED FOR JOHN ANDERSON,**

**MEDICAL BOOKSELLER, 40, WEST SMITHFIELD.**

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**1825.**

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# ANDERSON'S QUARTERLY JOURNAL.

## CONTENTS.

|  | Page. |
|--|-------|
| ART. 1. Dods on the Rotated or Contorted Spine . . . . .   | 3     |
| 2. Forbes on the Use of the Stethoscope . . . . .          | 14    |
| 3. Mascagni's Anatomia Universa . . . . .                  | 41    |
| 4. Sir A. Cooper's Lectures on Surgery, by Tyrrell . . . . | 47    |
| 5. Calvert on Diseases of the Rectum and Anus . . . . .    | 56    |
| 6. Dunglison on the Diseases of Children . . . . .         | 83    |
| 7. Adelon's Physiology of Man . . . . .                    | 89    |
| 8. Lovati and Bigeschi's Clinical Reports . . . . .        | 93    |
| 9. Stoker's Pathological Observations . . . . .            | 103   |

### *Quarterly History of Improvements and Discoveries in Medicine, &c.*

#### I. ANATOMY.

|  |     |
|--|-----|
| ART. 1. Antommarchi's Plates . . . . .                                   | 116 |
| 2. Comparative Anatomy . . . . .   | ib. |
| 3. Carus on Hairs in the Stomach of the Cuckoo . . . . .                 | ib. |
| 4. Cruveilhier on the Structure of the Trachea and<br>Bronchia . . . . . | 117 |

#### II. PHYSIOLOGY.

|  |     |
|--|-----|
| 5. Hancock's Essay on Instinct . . . . .   | 119 |
| 6. Magendie's Experiments on the Olfactory Nerves,<br>explained by Mr. C. Bell . . . . . | ib. |
| 7. Phrenology . . . . .  | 121 |
| 8. Wollaston on the Semi-Decussation of the Optic<br>Nerves . . . . .                    | 127 |
| 9. Wollaston on Single Vision with Two Eyes . . . . .                                    | 128 |
| 10. Gaspard's Experiments on the Cuckoo . . . . .  | 129 |
| 11. Chevreux on the Cholesterine in the Bile . . . . .                                   | ib. |

#### III. PATHOLOGY.

|   |     |
|---|-----|
| 12. Sublingual Pustules in Hydrophobia . . . . .  | ib. |
| 13. Irritation Distinguished from Inflammation in the<br>Mucous Membrane of the Bronchia, by Nauche . . . . . | ib. |
| 14. Scoutetten on Adhesions and False Membranes . . . .   | 131 |
| 15. Velpeau's Pathology of Phlegmasia Dolens . . . . .  | 132 |
| 16. Recamier's  |     |

## CONTENTS.

### IV. MORBID DISSECTIONS.

16. Recamier's Case of Softening of the Brain..... 132  
17. Hebb's Case of Poisoning by Oxalic Acid..... 133

### V. SURGERY.

18. Anderson's Operation for Applying a Ligature to the  
External Iliac Artery..... 134  
19. Snell on Artificial Palates..... 135  
20. Delpech's Amputation of the Hip-Joint..... ib.  
21. Delpech on the best Mode of Lithotomy..... 137  
22. Mr. Robertson's Case of Fracture within the Capsular  
Ligament..... 139  
23. Mr. Benjamin Bell on Interstitial Absorption of the  
Neck of the Thigh-Bone..... 140

### VI. PRACTICE OF PHYSIC.

24. Dunlop's Case of Poisoning by Opium..... ib.  
25. Venables' Clinical Report on Dropsies..... 141  
26. Turner on Medico-Chirurgical Education..... 142  
27. Dawson's Nosological Practice of Physic and Physio-  
logy..... ib.  
28. Dr. Stoker's Account of the Influenza..... ib.  
29. M. Andral, junr's. two Cases of Dyspnœa termina-  
ting fatally..... 145  
30. Thackrah on Digestion..... 148  
31. M. Zinc on the Danger of exhibiting Iodine..... ib.

### VII. MIDWIFERY.

32. Professor Paletta's Extirpation of the Uterus..... ib.  
33. Dr. Gooch's Mode of Treating Uterine Hæmorrhage 151

### VIII. MEDICAL JURISPRUDENCE.

34. Beck's Medical Jurisprudence, by Dunlop..... 152

### IX. MATERIA MEDICA.

35. Conspectus of Prescriptions..... ib.

### X. MISCELLANEOUS.

36. Dr. Copland's Notes to Dr. De Lys's Richerand.... 157

# ANDERSON'S QUARTERLY JOURNAL.

## CONTENTS.

|  | Page. |
|--|-------|
| ART. 1. Beck's Medical Jurisprudence, by Dunlop..... | 161   |
| 2. O'Halloran on Ophthalmia and Remittent Fever....  | 171   |
| 3. Jarrold on Curvature of the Spine.....            | 186   |
| 4. Michu's Medical Doctrine.....                     | 193   |
| 5. Venables' Clinical Report on Dropsies.....        | 207   |
| 6. Boyle's Treatise on Moxa.....                     | 211   |
| 7. ——— Treatise on Syphilis.....                     | 215   |
| 8. Andral's Pathology of the Chest.....              | 226   |
| 9. Averill's Operative Surgery.....                  | 248   |

### *Quarterly History of Improvements and Discoveries in Medicine, &c.*

#### I. ANATOMY.

|   |     |
|---|-----|
| ART. 1. Lizars' Anatomical Plates of the Brain..... | 258 |
| 2. Scarpa on the minute Anatomy of the Bones.....   | ib. |
| 3. The Phrenologists and the Frontal Sinus.....     | 261 |
| 4. Anatomy of the Brain, Viscera, &c.....           | 262 |

#### II. PHYSIOLOGY.

|  |     |
|--|-----|
| 5. Rolph on Phrenology.....                        | ib. |
| 6. Bellingeri on the Spinal Marrow.....            | 263 |
| 7. Mackenzie on the Action of the Capillaries..... | 266 |
| 8. ——— on the Muscularity of the Arteries.....     | ib. |
| 9. Despretz on Animal Heat.....                    | 268 |

#### III. PATHOLOGY.

|   |     |
|---|-----|
| 10. Bang on Sympathy between the Heart and Liver....    | 268 |
| 11. Hosack's Pathology of Fever.....                    | ib. |
| 12. Anderson's Case of Irritative Fever.....            | 270 |
| 13. Villermé on Inflammation.....                       | 271 |
| 14. Scoutetten's Case of Hypertrophia of the Brain..... | 272 |
| 15. Andral's Case of Inflammation of the Thoracic Canal | 273 |
| 16. Bampfield's Pathology of the Spine.....             | 274 |
| 17. Alison's Pathology of Scrofulous Disease.....       | 276 |

## CONTENTS.

### IV. MORBID DISSECTIONS.

|  |     |
|--|-----|
| 18. Thomas's Case of Rupture of the Heart. ....      | 277 |
| 19. Irwin's Case of Cancerous Duodenum. ....         | 278 |
| 20. Andral's Case of Obliterated Thoracic Duct. .... | 281 |

### V. SURGERY.

|  |     |
|--|-----|
| 21. Grafe's Extirpation of a Sarcomatous Tumour ....   | 282 |
| 22. Lizars' Case of Gastrotomy. ....                   | 283 |
| 23. Ryan on the Purulent Ophthalmia of Infants. ....   | 285 |
| 24. M'Clellan's Case of Amputation of the Lower Jaw. . | 286 |
| 25. Belcher's Case of Enlarged Tonsils. ....           | 288 |
| 26. M. Clever's Operation of Lithotomy upon himself. . | 289 |

### VI. PRACTICE OF PHYSIC.

|   |     |
|---|-----|
| 27. Dr. Uwins' Compendium of Theoretical and Practical<br>Medicine. ....    | 290 |
| 28. Dr. Kennedy on the Management of Children. ....                         | 291 |
| 29. Dr. P. M. Latham on the Diseases of the General Pe-<br>nitentiary. .... | ib. |
| 30. Carmichael on Venereal Diseases. ....                                   | ib. |
| 31. Dr. Scudamore on the Use of Colchicum in Gout. ....                     | ib. |
| 32. Dr. Cooke on Belladonna in Cancer. ....                                 | 292 |
| 33. Dr. Coates on Blood-letting. ....                                       | ib. |
| 34. Dr. Henry on Iodine in Gonorrhœa. ....                                  | 293 |
| 35. Dr. J. C. Cress's Case of Poisoning by Opium. ....                      | 294 |
| 36. Meplain on Convulsions. ....  | 296 |

### VII. MIDWIFERY.

|  |     |
|--|-----|
| 37. Dr. Hosack on Ergot in Uterine Hæmorrhage. ....      | 297 |
| 38. M. Gorat's Case of Citric Acid in Uterine Hæmorrhage | 298 |
| 39. Scarpa on Pregnancy, complicated with Ascites. ....  | ib. |
| 40. Respectability of Practitioners in Midwifery. ....   | 304 |

### VIII. MEDICAL JURISPRUDENCE.

|  |     |
|--|-----|
| 41. M. Orfila's Case of Poisoning by Arsenic. .... | 306 |
|--|-----|

### IX. MATERIA MEDICA AND CHEMISTRY.

|                                       |     |
|---------------------------------------|-----|
| 42. Paris's Pharmacologia. ....       | 308 |
| 43. Conspectus of Prescriptions. .... | 309 |

### X. MISCELLANEOUS.

|   |     |
|---|-----|
| 44. Dr. Copland's <i>Gentlemanly</i> Notice of our Criticisms of<br>his Edition of De Lys's <i>Richerand</i> . .... | 313 |
|---|-----|

# ANDERSON'S QUARTERLY JOURNAL.

## CONTENTS.

|  | Page. |
|--|-------|
| ART. I. Parry's Elements of Pathology and Therapeutics - - | 320   |
| II. Allan's Pathological and Operative Surgery - -         | 325   |
| III. Dr. G. Smith's Analysis of Medical Evidence - -       | 329   |
| IV. Beck's Medical Jurisprudence - - - -                   | 334   |
| V. Guibert on Croup and Hooping Cough - - - -              | 355   |
| VI. Mr. C. Bell on the Physiology of the Nerves - -        | 373   |
| VII. M. Brachet on the Convulsions of Infants - - -        | 378   |
| VIII. Dr. Latham on the Millbank Penitentiary - - -        | 384   |
| IX. Dr. Paris' Elements of Medical Chemistry - - -         | 407   |

### *Quarterly History of Improvements and Discoveries in Medicine, &c.*

#### I. ANATOMY.

|  |     |
|--|-----|
| ART. 1. Meckel's Manual of Anatomy - - - - -         | 423 |
| 2. Florman's Anatomical Manual - - - - -             | ib. |
| 3. Flajani on the Tensor Tarsi Muscle of the Eye - - | ib. |
| 4. Morgagni's Unpublished MSS - - - - -              | 424 |
| 5. Dr. Godman on the Brachial Fascia - - - - -       | ib. |
| 6. ————— Precautions for Dissecting - - -            | 425 |

#### II. PHYSIOLOGY.

|  |     |
|--|-----|
| 7. Magendie on the Insensibility of the Nerves of the<br>Senses - - - - -                  | 427 |
| 8. Wiltbank on the Action of the Heart - - - - -   | ib. |
| 9. Pelletan on the Galvanic Phenomena of Acupunctura-<br>tion - - - - -                    | 428 |
| 10. Magendie on the Olfactory Nerves - - - - -   | ib. |
| 11. Westrumb's Experiments on the direct passage of<br>substances into the Blood - - - - - | 428 |

#### III. PATHOLOGY.

|  |     |
|--|-----|
| 12. M. Nauche on the Characteristics of Expecterated<br>Matter - - - - -           | 429 |
| 13. Dr. James Johnson on Goitre and Cretinism - - -                                | 432 |
| 14. Cumin's Arrangement of the Diseases of the Bones -                             | 434 |
| 15. Dr. James Johnson's Case of a Tympanitic state of the<br>Pericardium - - - - - | 436 |



## CONTENTS.

### IV. MORBID DISSECTIONS.

|   | Page. |
|---|-------|
| 16. Dr. Godman's Case of Hernia - - - - -         | 537   |
| 17. M. Giponton's Case of Pericarditis - - - - -  | 436   |
| 18. M. Pied's Case of Pericarditis - - - - -      | 440   |
| 19. Dr. Brandreth's Case of Hydrophobia - - - - - | 441   |
| 20. Dr. Renwick's Case of Hydrophobia - - - - -   | 443   |

### V. SURGERY.

|  |     |
|--|-----|
| 21. M. Lallemand on the Diseases of the Genito-Urinary<br>Organs - - - - -     | 445 |
| 22. Oesterlen's Case of a Foreign Body expelled from the<br>Trachea - - - - -  | 447 |
| 23. Dr. Pockels' Case of Medullary Sarcoma of the Eye-<br>ball - - - - -       | 451 |
| 24. Dr. Godman on the Introduction of Straight Cathe-<br>ters - - - - -        | 456 |
| 25. Dr. Johnson's Case of the Excision of Hemorrhoids -                        | 457 |
| 26. M. Cloquet's Case of Ophthalmia Cured by Acupunc-<br>ture - - - - -        | 458 |
| 27. Dr. Martland's Case of Staphyloma Cured by Tapping. ib.                    |     |
| 28. Holbrook on Hydrocele - - - - -  | 459 |
| 29. Mr. Shaw's Supplement to his Work on Distortions<br>of the Spine - - - - - | 460 |

### VI. PRACTICE OF PHYSIC.

|   |     |
|---|-----|
| 30. Dr. Good's Study of Medicine - - - - -            | ib. |
| 31. Dr. B. P. Staat's Case of Poisoning by Opium - -  | 461 |
| 32. Dr. W. Ainslie on the Cholera Morbus of India - - | 462 |
| 33. Dr. Parry's Posthumous Medical Writings - - -     | 463 |

### VII. MIDWIFERY.

|   |     |
|---|-----|
| 34. Dr. Hosack's Cases of Amenorrhœa - - - - -        | ib. |
| 35. Dr. Holscher's Case of Extirpatio Uteri - - - -   | ib. |
| 36. Dr. Manly on Menstruation - - - - -               | 465 |
| 37. Lizars on the Extraction of Diseased Ovaria - - - | ib. |

### VIII. MEDICAL JURISPRUDENCE.

|   |     |
|---|-----|
| 38. M. Lassaigue's Mode of Detecting Spots of Blood -   | 466 |
| 39. Metaxa's Case of Rape - - - - -   | 467 |
| 40. Dr. Beck's Case of Trial and Conviction for Murder,<br>and pardon on the plea of Insanity - - - - - | 471 |

### IX. MATERIA MEDICA AND CHEMISTRY.

|                                    |     |
|------------------------------------|-----|
| 41. New French Medicines - - - - - | 474 |
|------------------------------------|-----|

### X. MISCELLANEOUS.

|  |     |
|--|-----|
| 42. Bye-Law of the College of Physicians - - - - - | 476 |
|--|-----|

# ANDERSON'S QUARTERLY JOURNAL.

## CONTENTS.

|  | Page. |
|--|-------|
| ART. I. Dr. Parry's Posthumous Works.....            | 477   |
| II. Dr. Paris' Elements of Medical Chemistry.....    | 497   |
| III. Dr. Good's Study of Medicine.....               | 508   |
| IV. M. Billard on the Intestinal Mucous Membrane.... | 529   |
| V. Welbank on Syphilis.....                          | 570   |
| VI. Dr. Davis's Elements of Operative Midwifery..... | 576   |
| VII. Dr. Prout on the Urinary Organs.....            | 598   |

### *Quarterly History of Improvements and Discoveries in Medicine, &c.*

#### I. ANATOMY.

|   |     |
|---|-----|
| ART. 1. M. Reil on the Preparation of the Cerebellum for<br>Dissection..... | 622 |
| 2. Dr. C. H. Parry on Anatomical Systems.....                               | 623 |
| 3. M. Bogros on the Structure of the Nerves.....                            | 625 |
| 4. Mr. Dermott's Illustration of the Arteries.....                          | 626 |

#### II. PHYSIOLOGY.

|  |     |
|--|-----|
| 5. M. Deferron on the Section of the Pneumogastric<br>Nerves.....                    | 627 |
| 6. Experiments, by Ficinus and Prinz, on the Injection<br>of Air into the Veins..... | 628 |
| 7. Hopley on the Circulation of the Blood.....                                       | ib. |
| 8. Rolando's Experiments on Generation.....  | 631 |
| 9. Dr. Stearns on the Spleen.....  | 632 |
| 10. M. Lassaigne on the Composition of Venous and<br>Arterial Blood.....             | 633 |
| 11. M. Azais' View of Physiology.....  | ib. |
| 12. M. Hensler's Physiological Anatomy.....  | ib. |

#### III. PATHOLOGY.

|   |     |
|---|-----|
| 13. M. Collin on Diseases of the Chest.....             | 634 |
| 14. M. Berard's Case of Tubercular Disease of the Brain | ib. |

[See next page.]

## CONTENTS.

|   | Page. |
|---|-------|
| <b>ART. 15. Cicatrization of an Ulcer in the Stomach of the late Professor Beclard.....</b> | 636   |
| <b>16. Dr. W. Ainslie's Pathology of Sporadic Cholera..</b>                                 | 637   |
| <b>17. M. Billard's Case of Partial Paralysis of the Face</b>                               | 639   |
| <b>19. Dr. Johnson's Case of a Partial Paralysis.....</b>                                   | 640   |

### IV. MORBID DISSECTIONS.

|   |     |
|---|-----|
| <b>19. Soare's Case of Lyttœ in a Rabid Dog.....</b>                                  | 641 |
| <b>20. Mr. Scot's Account of Post Mortem Appearances in the Cholera of India.....</b> | 642 |
| <b>21. M. Velpeau's Case of Phlegmasia alba Dolens....</b>                            | 544 |

### V. SURGERY.

|  |     |
|--|-----|
| <b>22. Mr. Liston on Lithotomy.....</b>                                    | 646 |
| <b>23. M. Civiale's Method of Destroying Urinary Calculi</b>               | 647 |
| <b>24. Mr. Rogers on Tying large Arteries to prevent Inflammation.....</b> | 630 |
| <b>25. Roger's Case of Osteo-Sarcoma.....</b>                              | 652 |

### VI. PRACTICE OF PHYSIC.

|   |     |
|---|-----|
| <b>26. Italian Experiments with Cinchona Bicolorata....</b> | 663 |
| <b>27. Dr. Clutterbuck on Fever.....</b>                    | 656 |
| <b>28. Holbrook on the Treatment of Bronchocele.....</b>    | 657 |

### VII. MIDWIFERY.

|  |     |
|--|-----|
| <b>29. Dr. Frank's Case of Rupture of the Uterus, in which Gastrotomy was successfully performed</b> | 661 |
|--|-----|

### VIII. MEDICAL JURISPRUDENCE.

|   |     |
|---|-----|
| <b>30. Dr. Penker's Case of true Uterine Pregnancy, lasting upwards of Three Years.....</b> | 662 |
|---|-----|

### IX. MISCELLANEOUS.

|   |     |
|---|-----|
| <b>31. Dr. Frank's Biographical Notice of Giuseppe Flajani, Professor of Surgery.....</b> | 663 |
|---|-----|

ANDERSON'S  
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ART. 1. *Pathological Observations on the Rotated or Contorted Spine, commonly called Lateral Curvature, deduced from Practice. In which are shewn the Causes that produce it, the Reason of its being mistaken for an Incurvation of the Spinal Column, and the Means best adapted to its Prevention and Cure, agreeably to the Principles laid down, and the Author's Experience.* By ANDREW DODS, M.D. 8vo. pp. 239. London; 1824.

IN the work before us there are many judicious observations, but we feel bound to inform our readers, that the manner in which the subject is treated by our author, is much more speculative than practical. The principal object of Dr. Dods, in publishing his work, appears to be to prove that the affection of the spine, commonly termed "lateral curvature," does not depend upon an *incurvation*, but upon a *rotation*, or turning round of the spinal column; and on this view of the subject his peculiar opinions on the pathology and treatment of the affection are for the most part founded.

In the introductory chapter, our author describes the serious nature of the complaint, and critically examines the different opinions which are entertained on its pathology. After pathetically describing the "deplorable condition" of patients with lateral distortion of the spine, he asks—

"Is it not truly, then, a most melancholy reflection, that a disease like this, so *monstrous* in its appearance, and fraught with so much *danger* and distress to the unfortunate sufferer, should rear its head amidst all the boasted advantages of our medical schools, and

continue its *unabated ravages*, amongst the youth of the present age, whilst no effectual check seems yet to have been given to its career."

Our author gives it as his opinion, that in lateral curvature of the spine there is no unhealthy condition or change whatever in the vertebræ, their cartilages, or ligaments. The data from which he argues on this point are lamentably scanty and insufficient; and they by no means justify the inferences which he deduces. Our author having assumed, or conjectured, that some writers have asserted, that no curvature of the spine could take place without such a diminution of the size of the body, or bodies of one or more of the vertebræ, as would allow the approximation of those immediately above and below, concludes his chapter with the following observations:—

"If this be the case then, that curvature of the spine cannot take place without disease, while at the same time it makes a constituent part of the deformity, as it is generally supposed, it ought of course to follow, that every contorted spine should, upon dissection, exhibit evident marks in the vertebræ of its former existence. This, however, as I have already stated, is not the case: for contorted subjects are daily met with, in whose vertebræ no traces whatever of disease can be found; which brings me to the following conclusion; namely, that if there be no disease of the vertebræ, there consequently can be no curvature of the spine; the deformity must be accounted for on some other principle. This I have stated to be the *rotation*, or twisting of the spine in the line of its axis, exhibiting to us only a changed aspect of the column, the effect of a peculiar state or condition of the muscles of the back, which always takes place some time previous to any displacement of the spine; the nature and cause of which I shall now endeavour to explain."

"The same arguments may be applied to rickets, as being the cause of the contorted spine, which I have mentioned of scrofula. Besides, rickets is known to be a disease of infancy, and generally terminates long before the period at which contortion of the spine is found, in general, to make its appearance."

In the next chapter, our author considers "the causes which produce the rotated or contorted spine." He ascribes lateral contortion of the spine wholly to *muscular contraction*. This morbid condition of the muscles, he says, results from the state of inaction in which they are kept by the fashionable modes of education.

"The causes," he observes, "of the organic disease of the muscles of the back, which I have said produces contortion of the spine, may be briefly stated to be whatever shall, by retaining the body in the erect or extended position, keep them too much in a state of contraction, and prevent in them the necessary interchange of relaxation; whether this shall be occasioned by the voluntary

effort of the child itself, to obey the importunate cry of its mother, or governess, *to keep the head up and shoulders back*, or by any of those painful instruments which are so much used now for this purpose. Position, of whatever part of the body, if long continued, will certainly disorganize its muscles; and it matters not what position may be assumed. It appears to me, however, that this disorganization of a muscle is more the effect of its constant *contraction*, than of its constant relaxation."

Our author having considered what appears to him to be the causes of contortion of the spine, proceeds to shew the manner in which the contortion or rotation of the spine is produced, and the reason for its being mistaken for an incurvation of the spinal column.

"When in the erect position we survey," he says, "this beautifully constructed column, from the head downwards, we observe in it, contrary to every principle of architecture, three curvatures, or flexures; the first of which inclines forwards to form the neck; the second, backwards to form the back; and the third, again, forwards to form the loins; and there may be yet a fourth included, inclining again backwards, by those who reckon the sacrum as part of the column; but as this does not contribute to the production of the deformity in question, I shall only notice three.

"The three natural flexures of the spinal column, viz. in the neck, back, and loins, although existing in every one, like other parts of our bodies, are seldom to be found in two persons exactly the same, nor do they always bear a relative uniform proportion to each other; and it is on this account that the difference of the figure of the trunk of the body, in different individuals, more particularly depends."

The spinal column being rotated, and the three natural flexures described above being brought into view, constitute, our author informs us, the deformity, which is commonly called lateral curvature of the spine. There is, he says, no curvature, but the spine is merely twisted or rotated by the "*disorganization*," or "diseased contraction," of the muscles of one side of the trunk. He states that it does not happen, in all cases of contorted spine, that the whole column is moved round; if it were so, we should have invariably the profile of its three flexures brought into view in the manner described; whereas, it is well known that there are frequently but two of them observed. We extract the following passage from his work, as the best way of putting our readers in possession of our author's views on this part of the subject:—

"During the course of my operations upon several patients, I was struck in all of them (for they were all contorted to the right side) with a considerable bony hardness and projection on the left side

of the loins, raised nearly to a level with the spinous processes ; and this I found to be the case in the patients whose spine exhibited little or no apparent curvature in the loins, as well as in those in whom the apparent curvature was very great. Being led to investigate this anomaly, I redoubled my exertions to discover the cause ; and I found, after the muscles had been relaxed by friction (for they were in every case extremely rigid), that the bony projection was the transverse processes of the vertebræ of the loins, which I could now as distinctly feel and count as the spinous. From this circumstance I was led to examine whether I could feel the transverse processes of the same vertebræ on the opposite side, but without effect, for they appeared to have sunk inwards, completely out of reach. Having satisfied myself of these facts, I then reasoned in the following manner :—

“ If these distortions of the spine, as it is generally supposed, depended upon a *direct* lateral curvature of the column, the transverse processes, although they would be in this case separated from each other on the one side, and approximated on the other, yet would they not be altered in their transversity with respect to the body, and consequently ought to be as easily discovered and felt on the right side as on the left, but which I found was not the case. I then asked myself what movement of the vertebræ would bring their transverse processes to be so prominent, and so distinctly felt on the one side, while they were totally out of reach on the other, and I concluded it must be their *ROTATION*.”

“ Being satisfied that this movement had taken place in the vertebræ of the loins, I suspected that the same had occurred to those of the back ; but as I had no transverse processes here to guide me, similar to what I had in the loins, because of their attachment to the ribs, I was obliged to confine my examination to the spinous processes, which I found evidently to lie obliquely over the right side, in contact nearly with the ribs, which were raised up in an opposite direction.

“ Being now convinced also, that the vertebræ of the back were rotated like those of the loins, I concluded that those of the neck had undergone a similar change, and therefore that the whole column was spirally twisted, and exhibited to me the profile of its natural flexures.”

That our author should have discovered in the way he describes, what every one had before perceived, that in cases of lateral curvature of the spine, the spinal column is more or less rotated, or, in other words, that the patients have what their mammæ call a *twist*, is easily understood ; but it is not so easily comprehended how he came to overlook what is equally palpable and certain, that they have also *curvature*. He admits what by the bye cannot be denied, that in lateral distortion the spine is often very considerably shortened. Now how, let us

ask, is this shortening of the spine to take place, if you have only rotation, i. e. "the profile of its three flexures brought into view," and no curvature? The fact, however, is, our author himself proves what he all along labours so hard to disprove, that there is actual and positive lateral curvature of the spine; for he admits, that when the muscles have rotated the spine as far as possible, they exert their force perpendicularly, and thus increase the natural flexures. His words are—

"The vertebræ ceasing to be further rotated, the force of the contracted muscles is now spiral in compressing the vertebræ downwards and laterally. We shall, therefore, find, from the extensive connection of the long extensors of the back, which I have shewn to be the principal muscles concerned in producing the deformity, that the whole column will yield in such a manner as that its natural flexures shall be increased, while the sides of the vertebræ, on which the force of the contracted muscles more particularly falls, from their altered position, will be much compressed: hence, in old standing cases of contortion, the reason why the apparent curvatures become so great, and the bodies of the vertebræ with their inter-articular cartilages, exhibit frequently, on dissection, no other marks of disease than what we find in general to arise from *unequal pressure*, made in a similar manner upon any other bones of the body; and why, likewise, these marks of compression are so frequently absorbed on *one side* of the bodies only."

From the preceding observations, it appears that in such cases the spine is twisted and bent laterally, and that being the case, there must certainly be *lateral curvature*.

It is extremely laughable to observe the very great importance which authors often attach to some fancied discovery, that to every one else appears altogether insignificant, or even no discovery at all. The following quotation will enable our readers to estimate the supposed advantages of our author's "*principle of rotation*."

"Upon the *principle of rotation* of the vertebræ, we can explain why there should be the appearance of two and sometimes of three curvatures in the column, because of the changed aspect of its flexures. We can explain also why the ribs on one side fall down, and are pushed forwards, causing a protrusion of the chest in front, and a sinking in of it behind; and why, on the other, they are raised up and dragged backwards, causing the enlargement of the shoulders behind, because of their double attachments to the vertebræ. It is upon the principle of rotation of the vertebræ, also, that we can explain why, upon dissection, there are in some cases no other marks of disease in the bones than what are known to occur from unequal pressure; why, in others, there is only a slight diminution of the thickness of one side of the intervertebral cartilages, while the deformity would warrant us to suspect considerable loss of sub-



stance even in the vertebræ themselves; and why in some there are no diseased appearances at all. It is upon the principle of rotation of the vertebræ, likewise, that we can account for the frequency of the malady, because of the general adoption throughout the country, of the means calculated to produce contraction of the spinal muscles in children; and explain why so many women and children go about, with no other marks of ill health or inconvenience, than what arises from the altered figures of their bodies; and why others suffer so severely, and become afflicted with all the miseries of diseased vertebræ, because of the looser connection of the vertebræ with each other in some persons than in others, and the irritability of constitution. And it is, moreover, upon the principle of rotation of the vertebræ, that we can explain why there has been so much difference of opinion amongst medical men respecting the complaint, and why all the different means proposed by them, both for its prevention and cure, have availed nothing in the one, and effected as little in the other, because of their mistaken pathology."

We come now to that part of the subject which, says Dr. Dods—

"I consider of infinite importance to the rising generation, to that part of it which treats of the prevention and cure of spinal contortion. Of these two very desirable objects, I would say (however others may differ from me), that there is nothing more easy and simple than the former, or more uncertain or difficult than the latter: uncertain, because no one can say *à priori*, whether there be not loss of substance, from continued pressure, in some of the vertebræ; and difficult, because of the complicated movements of the different bones of the trunk of the body concerned in the deformity."

Our readers will thus perceive that the Doctor candidly admits, that upon his plan the cure of the deformity is neither certain nor easy. The means he adopts for the prevention and cure of the disease are all founded upon his opinion, that the deformity is wholly produced by a contracted state of the muscles, the result of inaction. Proceeding upon this principle, our author objects to most of the measures commonly employed for the prevention and cure of the deformity. He says—

"In making my observations upon the prevention of spinal contortion, I feel it incumbent upon me to say a few words on each of the means now used for this purpose; not so much with the view of prepossessing any one in favour of the mode I myself recommend, as for the purpose of pointing out their pernicious effects upon the spinal muscles, and to shew how much they are calculated to produce the very complaint that they are intended to prevent. The first of these means which I shall mention is that observance of position, which children and young ladies are taught every where, as a branch, I might say, of their education; that *attention du corps* of the French, that we have, in this imitative age, so faithfully copied. I have al-

ready shewn, that the regular and frequent interchange of contraction and relaxation in the muscles of the human body, is the only way in which they can be preserved in a healthy condition, and that the latter of these states can be borne with impunity much longer than the former." "The unceasing motions of a young child, from the time it rises from its bed in the morning, until it resumes it at the close of day, shew evidently that any restraint upon such activity must be opposed to what is natural, for it is as yet by instinct that a child is actuated, and not by reason \*. But even at this early period of childrens' lives, the cares of their mothers and tutors are directed to the preservation of their figures, and the prevention of that much dreaded evil spinal distortion; and it is with this view that young people are tutored to observe so much the erect position, especially when they sit down to rest themselves, and to be checked on all occasions, should they bend forward their bodies to relieve themselves from pain."

"The constant contraction excited in the spinal muscles when the body is retained in the erect position, will assuredly not fail during their evolution to disorganize them. They will, in the first place, become enfeebled by it, and rendered unable to support the body: they will waste away, and lose their elasticity; and if persisted in, will become permanently contracted. Thus it is that children who are tutored to observe much the erect position are frequently unable to do so, and assume those lounging attitudes for which they never fail to be chastised. This severity to children arises from the impression that these postures are the causes of distortion of the spine; and because some have written to say so, it is the more confidently believed. But let me dissuade those who are of the opinion from such a belief, and assure them, that it is not to those lounging postures that contortion owes its origin, but to the continued erect position of the body, which is every where so much insisted on; and that the lounging postures, so greatly dreaded, are themselves but effects of the same cause." "I would, therefore, strongly urge the forbearance of placing any restraint whatever upon the actions of children as to position, and condemn the practice, now become so general, of causing them to observe so strictly the erect posture while sitting or standing, as a powerful agent in disorganizing the muscles of their tender backs, and contorting their spines."

For the reasons stated above, the Doctor objects to the chairs with small seats and high backs, called Education Chairs, as seats for children, and recommends that they should sit upon chairs with broad and deep bottoms, like a common drawing-room chair. He recommends too, that the child should be allowed to sit on it as best suits itself, for of this he thinks it is the best judge.

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\* It appears from this, that Dr. Dods does not admit a child to be a rational being. May we ask him at what age reason begins? The answer, we think, will puzzle him. EDITOR.

"A seat of this kind, without restriction as to the manner in which children should occupy it, will, in my judgment, do more for the preservation of girls' figures, and the prevention of spinal contortion, as well as disease, than all the complicated machinery in the country, and much more so than what is generally supposed, if we are to judge at present from its total prohibition."

Our author objects to the use of stays, collars, back-boards, and stocks, as modes of prevention. Speaking of the horizontal and inclined planes, he says—

"For my own part, I hold them to be as ill-judged and pernicious a contrivance for the prevention of contortion of the spine, as could be well devised; for by keeping the body constantly extended, all the muscles of the spine, at least all the extensors, remain quiescent in the greatest degree of their organic contractility; which condition of a muscle, if long continued, I have shewn never fails to disorganize it. So instead of ranking these planes among the means of prevention, I would most certainly place them amongst those of contortion. But I will even go farther than this, which I shall notice again when speaking of the cure, and say, that if a person be made to occupy either of these planes *constantly*, which is sometimes done, it will, in my opinion, paralyze the lower limbs."

The absurdity of all this is so obvious, that we shall not waste the time of our readers by combating it, but shall content ourselves with merely remarking, that many a child who is completely paralytic, when it first lies down, rises from its couch after having lain for two or even three years not paralytic, but with comparatively the free use of its limbs.

Our author's prophylactic measures may be learnt from the following passage, which we give in his own words:—

"I have said, that emaciation of the back and trunk of the body is the first indication we have of approaching contortion of the spine. Whoever then shall find such an appearance in any of their children that are otherwise healthy, or in whom no particular disease is present, which would satisfactorily account for such a state of their bodies, should constantly take the alarm for their safety; for it is a certain sign that all is not well with the muscles beneath; and that the organic disease or contraction, which is ultimately to contort their spines, and otherwise disfigure their bodies, has already commenced. That such is the case with many hundreds at this present moment I am well satisfied; and although these spines are in most imminent danger of being contorted, yet is there a hope remaining of their being preserved from so dire an evil."

"Let the children then, in whom this appearance of the back has evinced itself, be instantly freed from all and every kind of restraint and embarrassment of dress. Let their stays be thrown off, and their education chairs laid aside; and should they have been laid down on reclining boards, or be fettered with galling instruments, let them rise from the one, and be released from the other; and

instead of such restraints, let them enjoy the free and uncontrouled exercise of their bodies. Let the muscles of their backs be relaxed by every means that are known to be good for muscles that are contracted. Let frictions be applied to them two or three times a week, or every day, should it be found necessary, and that with oil too, after the manner I have recommended for the cure. Let the joints of their spines be exercised and motioned by the frequent and daily flexion and extension of their bodies by means of the simple contrivance I have invented for the purpose hereafter to be described; for it is the want of this natural motion of the spine, the want of the proper exercise of the functions of its muscles, which is wasting and contracting them; and let them after this exercise lie down on a comfortable sofa for an hour in the morning pointed out, or upon the couch which I have invented, and made use of for the cure, in order that the contracted muscles of their spines may be further relaxed. Let them, likewise, when they wish to rise from the recumbent position, be provided with a chair or seat to sit down, such as I have described, and let them lean to the back of it, and enjoy that natural sinking down of the body within itself, which seems to be so essential to the preservation of the spinal column and its muscles, but which the young fashionable now knows not what it is to enjoy."

*On the Cure of the Rotated or Contorted Spine.*—In the treatment of lateral distortion of the spine, our author considers that medical men have laboured under great difficulty and embarrassment from not taking a correct view of the pathology of the complaint. He says—

"This is the difficulty which has hitherto presented itself; but which I have now surmounted, I hope, upon philosophical as well as anatomical principles; shewing, that what have been all along considered curvatures of the spinal column, is but a changed aspect of its natural flexures, which are brought into profile, or rather semi-profile, by the aggregate rotatory movement of the vertebræ upon each other; the consequence of the permanent contraction of the muscles that move them, produced by mal-position; and that, therefore, medical men have been striving all along to account for what does not exist; the whole being a *visual as well as a manual deception*."

From such a high-sounding exordium our readers will naturally expect some novelty, or at least some great improvement in the treatment, but we much fear that they will be disappointed, and not derive much assistance from the boasted *principle of rotation*.

As the Doctor accounts for the production of spinal contortion purely on the principle of muscular contraction, of course the cure must be conducted solely on that of muscular relaxation. Crutches, and the use of the inclined and horizontal planes, are

decidedly objected to as modes of cure, and so are all the means that have a tendency to preserve the muscles in a state of inaction. Our author strongly condemns the employment of mechanical extension, and says, "As there is *no curvature* of the spinal column, there consequently can be no need of extension to remove it; and in every case where it is applied, its effects only go to destroy the muscles and ligaments of the spine." He also objects to the carrying weights on the head, as recommended by Mr. Grant and Mr. Wilson. He says, he believes it to be a practice big with mischief to those on whom it is tried; and in every case of contorted spine injurious in the extreme.

For the purpose of producing muscular relaxation, the only mean in our author's opinion by which contortion of the spine can be cured, we are to have recourse to *friction, manipulation, position, and exercise.*

"In all cases of contorted spine, the FRICTION necessary to overcome the contraction of the spinal muscles, and those of the trunk of the body, must be of such a nature as to act upon their remotest fibres; if it does not, the patient, as well as the operator, had better save himself the trouble of going through the motions; for be assured, it will avail nothing in the cure."

As an auxiliary to friction, the Doctor employs manipulation.

"It is," he says, "for the purpose of supplying the defect of friction to such muscles as we cannot reach, together with the endeavour to return the displaced vertebræ to their natural situations, that I make use of manipulation; and as I always employ it at the same time that I use friction, so I would consider it only a species of this, or, if you please, an auxiliary."

Speaking of POSITION our author observes—

"I have said so much against position in the contorted spine; that my readers may think it does not become me now to enter it on the list of the means which I use myself in the cure; yet, however paradoxical it may appear, I certainly have: but it must be remembered that there is with position, as with most other things, a right and a wrong; and as I have already pointed out what I consider to be the bad, I shall offer in its place what I consider to be the good position."

The good position is to bend forward the body, and relax the spinal muscles; so therefore after friction, we are to place our patients on their backs upon a *concave* elastic couch, on which there is placed a mattress, two, or two and a half inches thick. Continued position of any part of the body has been stated to be, in every instance, both painful and injurious to it. Our great object, therefore, in the use of position for the cure of the contorted spine, is to avoid as much as possible the constant observance of any one.

"The patient then, while she lies down on the couch, should have a change made in it frequently during the day, by increasing and diminishing, alternately, the concavity on which she lies, by which there will be a corresponding change produced in the contractions and relaxations of the spinal muscles, although she has made no effort on her part to do so. This frequent change in the muscles of the spine, will not only prove a safeguard to them against the effects of continued position, but will materially contribute to their recovery."

As our author considers contortion of the spine to be altogether produced by a contracted condition of the spinal muscles, and that contraction to be the effect of inaction, exercise is, of course, a most essential part of the treatment. "The exercise that I order for the cure of the contorted spine, is *flexion* and *extension* of the body; or, in other words, alternate relaxation and contraction of the spinal muscles." The manner of applying the exercise is by means of a simple contrivance of which a diagram is given.

We have thus concluded a brief analysis of Dr. Dods' work. We are sorry we cannot recommend it as throwing any new light upon the pathology or treatment of spinal deformity. His principle of rotation we cannot consider as any novelty, except at least so far as the name is concerned, and the manner in which he applies it. The plan of treatment which he advises will, we feel convinced, be found to fail; and we most readily protest against his strictures upon the use of the inclined plane. For instance, we deny the possibility of confinement to the horizontal position producing in a patient contraction of the extensors of the back, and consequent spinal deformity. Instead of producing contraction, we contend that it relaxes the muscles. If such is not the case, how happens it that a person confined to the horizontal position on account of a lateral distortion of the spine, generally in a few weeks gains considerably in height? Surely this could not be the case if, while the body is in a recumbent position, the extensor muscles are in a state of continually increasing contraction. Muscular action is undoubtedly the principal agent in the production of the lateral spinal deformity; but it operates, we believe, in a manner very different from that supposed by our author.

**ART. II.** *Original Cases with Dissections and Observations, illustrating the Use of the Stethoscope and Percussion in the Diagnosis of Diseases of the Chest; also Commentaries on the same Subjects, selected and translated from Awenbrugger, Corvisart, Laennec, and others.* By JOHN FORBES, M.D. Physician to the Chichester Dispensary, pp. 340. 8vo. London, 1824.

This is a practical work of great merit, and though it has been rapidly put together and published with great haste, it gives evidence that the author is an accurate observer, a learned and a skilful physician. In our opinion no apology was needed for the imperfections of his work; on the contrary, we think Dr. Forbes entitled to the thanks of every liberal-minded practitioner of medicine, for the valuable body of facts which he has brought forth in the present volume. No doubt, he is enamoured of the stethoscope, and is enthusiastic in its praise; but where do we ever meet with great improvements in science without enthusiasm, or consummate skill, without laborious perseverance?

It would appear, our author has observed, from the rapid sale of his translation of Laennec, and from the notice taken of it in the Journals, that a considerable impression had been made on the public mind in favour of the stethoscope; but the impression seems not to have been a lasting one, as no case illustrative of its use has as yet been published.

"From this circumstance," says Dr. Forbes, "and from not having heard of its employment in any hospital, or indeed by any individual practitioner in this country (with the exception of my friend Dr. Duncan, Jun. of Edinburgh), I am led to fear that the impression made was more lively than profound, and that through the influence of prejudice, theory, and indolence—one or all—the greatest medical improvement of the present age, is in danger of sharing the fate of those thousand idle and useless projects which daily spring up among us, and which, after obtaining a temporary notoriety, through the patronage of inexperienced and over-zealous individuals, soon sink into merited oblivion."

When the author published his translation, he was but little acquainted with mediate auscultation, and was an entire stranger to the employment of percussion; but since that time, he has frequently put both to the test of practice. Percussion indeed, seems hitherto to have been little known in this country; and though Awenbrugger's work was published so far back as 1760, and

was favourably noticed at that time in the *Leipsic Commentarii*, a few only of the English works on general medicine have mentioned it in vague terms. Even Dr. Buchan in his *Symptomatology*, has confounded it with mediate auscultation, and that acute physician, Dr. Baron, has spoken of it as if it were the same thing with the succussion of Hippocrates. To render it more known, Dr. Forbes has given a translation of the original work of Awenbrugger, and has, at the same time, drawn up a summary account of auscultation; and he thus expresses his strong opinion of their utility as diagnostic measures in the practice of medicine:—

“During the last two years and a half,” he observes, “I have been in the habitual employment of auscultation and percussion (more especially the former), in my public and private practice, and in a pretty extensive field; and I can most conscientiously add, that the additional experience of every successive month and week, has only tended to increase more and more the confidence previously reposed in them. If I may be allowed to judge from the benefit which I have myself derived from them, in all the departments of medicine; in pathology, diagnosis, prognosis, and treatment, I cannot but consider their general adoption by the profession in this country, as an event to be most ardently desired, and their comparative rejection hitherto, as a circumstance to be much deplored.”

As percussion and the stethoscope throw much light also, or rather certainty, on the pathology of pectoral complaints, we are enabled to form a much more correct prognosis than we could otherwise have done; a circumstance which is thus illustrated by our author.

“Suppose,” he says, “two physicians of equal skill and experience, but only one an auscultator, met in consultation, for the first time, on a case of chronic pleurisy or peripneumony, in no very advanced stage. Probably the only remarkable symptoms are, a violent cough with little or no expectoration, more or less dyspnoea, especially on motion, and incapacity to assume, with comfort, certain postures; the pulse perhaps is natural, there is no pain, no febrile heat, no hectic, and inconsiderable loss of flesh; or, perhaps, one or other of these states may exist. From these general symptoms, will he who is not the auscultator venture to pronounce, with any degree of confidence, his opinion of the precise nature of the disease; much more, to declare it to be one that will almost certainly prove fatal, and scarcely even admit of relief from any kind of treatment? No practitioner, I affirm, judging from the common symptoms only, can be justified in entertaining such opinions. But if, to the examination of the symptoms, be superadded the exercise of percussion, or the exploration by the stethoscope, for only two or three minutes; and if the former elicits the preternatural or



fleshy sound over the whole of one side of the chest, or the latter indicates the absence of respiration over the same space ; then, at once, are obtained sufficient materials (conjointly with the previous history and present symptoms of the case) to form a correct diagnosis, and to justify and authorise the most ominous prognosis. Were the benefits of auscultation confined to this single case of disease, it would, even then, be entitled to the highest consideration."

The same observations will apply to the treatment of disease. If it is known to be incurable, the patient will be spared the exhibition of useless and disagreeable remedies ; and the treatment which may be thought necessary will be founded on correct principles.

We will not discuss every subject which our author has so ably handled in his preface ; but we agree with him in thinking that the dissection of dead bodies, however otherwise commendable, has been the occasion of many erroneous views connected with the pathology of diseases. Thus, the more striking phenomena of its last stage have been regarded as the constituents of a disease, while comparatively little attention has been paid to the phenomena of its whole course.

"The truth," Dr. Forbes very justly observes, "unquestionably is, that there are many diseases, of the pathology of which we are entirely ignorant ; and there is every reason for believing, that not a few of these, if really consisting in any change of organic structure, are of such a nature as will never be exhibited beneath the knife of the dissector. Nay more, it is certain that, even in those diseases with the pathology of which we seem to be well acquainted, almost all our beneficial practical efforts must be directed to a state of parts which preceded that which we see in the dead bodies of our patients. It is indeed with me, I confess, a matter of considerable doubt, whether we are not accustomed greatly to overrate the powers of our remedial agents, to remove diseases that consist in any considerable physical alteration of an organ ; and whether, in our attempts to do so, we do not sometimes establish the morbid state, by interfering with the remedial powers of nature, which, perhaps, are alone capable to effect the wished for change."

Trusting too much again to the remedial powers of nature, the practice of many eminent physicians has been feeble and unvarying, but such practice is far less blameable than the irrational vigour displayed by some British practitioners in the latter stages of disease.

In the greater number of recent inflammatory affections, perhaps the stethoscope may be dispensed with ; but our author thinks that in all chronic diseases of the chest, in acute diseases which have become so, and in all cases of a doubtful nature, a trial at least of percussion and auscultation is almost indispen-

sible. But they must on no account be adopted as guides of practice by any man, till, by considerable experience, he has satisfied himself of their correctness; and even when he has acquired experience, he must be cautious and circumspect in using them.

The cases published by our author are detailed at great length, that they may make a proportionably strong impression, by shewing the very grounds on which he came to his conclusions. These conclusions, he acknowledges, may be sometimes incorrect, but the explorations which gave rise to these were true and may be depended upon. But percussion and mediate auscultation he wishes to be *additional* only to the common symptoms, and not *exclusive* of them.

Having thus discussed the principal topics contained in our author's preface, we now proceed to give some account of percussion and mediate auscultation, which is necessary to the complete understanding of our author's cases.

The method of percussion is founded on the property possessed by the human thorax, in common with most hollow bodies, of giving out certain sounds when struck in a particular manner. The sound elicited in this way from the healthy thorax or chest, resembles the sound of a drum when it is covered with a thick woollen cloth. It is observed on the right side anteriorly, from the clavicle to the sixth true rib; laterally, from the axilla to the seventh rib; and posteriorly, from the scapula to the second and third false ribs. Disease of the liver, however, or other abdominal organ, will sometimes contract the sonorous sphere as above described; to the state of these organs therefore, it will be necessary to attend. The left side yields the sound from the clavicle to the fourth true rib, anteriorly; and on the back and laterally in the same extent as the other side over the space occupied by the heart, the sound is duller than on the other parts; but it varies much in different persons. Except in the cardiac region the whole sternum yields as distinct a sound as the sides of the chest. The same sound is perceptible over that part of the spinal column which is connected with the chest. But the sound in very fat persons is almost lost.

In percussion, the thorax should be struck gently with the points of the extended fingers brought close together; but percussion with the flat of the open hand is also useful. It should be performed more forcibly when the subject is a robust and fat person. In most cases it ought to be employed on the naked chest. During inspiration and retention of the breath, the sound is every where louder, and during its performance the patient should always be in the sitting posture. While

undergoing percussion on the fore parts of the chest, the patient must hold his head erect, and his shoulders should be thrown back; for in this way a clear sound will be obtained. While the lateral parts of the chest are in the act of being struck, the patient should hold his arms across his head; and when the back is the part operated upon, the patient should bend forwards, and draw his shoulders towards the anterior parts of the chest.

When a distinct sound, commensurate to the degree of percussion, is not obtained from the sonorous regions above-mentioned, a morbid state of some part within the chest is indicated; and if, on percussion, a sonorous region of the chest yields only a sound like that of a fleshy limb when struck, disease exists in that region. And if the same sound still continues, when the breath is held in after a deep inspiration, the disease is deep-seated in the chest; and if the same result is obtained, both before and behind, on points precisely opposite, the disease occupies the whole diameter of the chest.

The morbid sound occurs in acute and chronic diseases; and it always accompanies a copious effusion of fluid in the thoracic cavity.

The morbid sound which is observed in acute diseases, occurs during their progress, or at their termination. Percussion should be used in such cases; for an acute disease of the chest apparently over, has been known to end in a fatal vomica or a fatal schirrus of the lungs. In peripneumony, or pleuro-peripneumony, if the inflammation is acute, the morbid sound is perceptible on the second, third, or fourth day at farthest; and, if the disease is to terminate fatally, the natural resource gradually lessens, and is entirely lost by the sixth or seventh day; but if recovery takes place it gradually reappears. The morbid sound occurs most frequently in inflammatory affections; but it may also be observed sometimes in epidemic exanthemata, previously to the eruption; and then the peculiar sound extends over the whole chest, and is *proportioned to the amount of the subsequent eruption*. The duller the sound, the severer the disease; and the more extensive its space, the more certain is its danger. The disease is most dangerous on the left side. A morbid sound on the superior and anterior part of the chest indicates less danger than on the inferior or posterior parts. The total want of sound, over a whole side, is in many instances a fatal sign. Its absence, along the course of the sternum, and over a large space in the origin of the heart, is also a fatal sign.

Percussion, as a diagnostic measure, is of much more essential service in chronic than in acute diseases; for in the former it

will detect morbid changes, which could not otherwise have been known, or will point out danger where none was indicated by the ordinary symptoms.

Such are the few remarks explanatory of percussion, which we have thought it necessary to extract from the work of Awenbrugger, and the commentary of Corvisart; but we cannot too strongly recommend the whole to the attention of the reader.

We now proceed to mediate auscultation. We have already spoken of it in a former Journal, when reviewing the original work of Laennec; yet it will be proper to give some account of it in this place also.

"This method is founded," as Dr. Forbes informs us, "on the well-known property of solid bodies to transmit sound with much greater readiness than is done through the air. In the present case, this property is applied to the discovery of the sounds produced in the interior of the chest, by the natural motions of the organs of circulation and respiration. From the modifications of these sounds, in health and disease, a judgment is formed respecting the actual state of the organs.

"The instrument used for this purpose is called the stethoscope. This consists simply of a cylinder of wood, a foot in length, perforated in its centre longitudinally, by a bore three lines in diameter, and formed so as to come apart in the middle, for the benefit of being more easily carried. One extremity of the cylinder is hollowed out into the form of a funnel to the depth of an inch and a half, which cavity can be obliterated at pleasure, by a piece of wood so constructed as to fit it exactly, with the exception of the central bore, which is continued through it, so as to render the instrument in all cases a pervious tube. The complete instrument—that is, with the funnel-shaped plug infixed—is used in exploring the signs obtained through the medium of the voice and the action of the heart; the other modification, or with the stopper removed, is for examining the sounds communicated by respiration. A solid cylinder, without any perforation, is the best instrument for exploring the action of the heart; but as this form is not so good for examining the voice and respiration, the perforated cylinder is commonly used for all purposes. On all occasions, the cylinder should be held in the manner of a pen, and the hand of the observer should be placed very close to the body of the patient, to ensure the correct application of the instrument.

"The end which is applied to the patient—that, namely, which contains the stopper or plug—ought to be slightly concave to insure its greater stability in application; and when there is much emaciation, it is sometimes necessary to insert between the ribs a piece of flax or cotton, or a leaf of paper, on which the instrument is to be placed, as, otherwise, the results might be affected by the imperfect application of the cylinder. The same precaution is necessary in the examination of the circulation, in cases where the ster-

rum, at its lowest extremity, is drawn backwards, as frequently happens with shoemakers, and some other artisans."

There are three kinds of exploration by the stethoscope, viz. that of the voice, the respiration, and the circulation.

"The only diseases," says our author, "to the diagnosis of which the exploration of the voice has been applied with success, are, Phthisis Pulmonalis, Pleurisy, and the Pneumo-Thorax.

"If we apply the stethoscope to the larynx or trachea of a person in health when speaking, we hear the voice of the individual as if coming directly from the point on which the instrument rests, and reaching our ear through the canal in it. In the second stage of phthisis, when tubercular excavations exist in the lungs, if the stethoscope be applied to the chest, over the site of one of these, the same transmission of voice through the tube is perceived. This phenomenon has been named *Pectoriloquism*: it is the pathognomonic sign of the morbid state just mentioned.

"In cases of pleurisy, with effusion of serous fluid, there is a partial transmission of the voice, somewhat resembling pectoriloquism, yet peculiarly modified so as to be easily distinguished from it: this is named *Hæmophonism*, from a supposed resemblance that it bears to the voice of a goat.

"In certain cases of tubercular phthisis, and in that particular variety of pneumo-thorax, where the accompanying empyema communicates with the bronchia by means of a fistulous opening, the exploration of the voice conveys to the ear a peculiar sound, which bears a striking resemblance to that emitted by a cup of metal, glass, or porcelain, when gently struck with a pin, or into which a grain of sand is dropped. This sound has been named *Metallic Tinkling*, and is considered pathognomonic of the triple lesion above mentioned."

On applying the cylinder, with its funnel-shaped cavity open, to the breast of a healthy individual, we hear, during inspiration and expiration, a slight but extremely distinct sound, answering to the entrance of the air into, and its expulsion from, the air-cells of the lungs. It is almost equally distinct in every part of the chest, but more particularly in those points where the lungs, when dilated, approach nearest to the thoracic parietes. It is equally perceptible on the larynx, and on the cervical portion of the trachea.

In making this exploration, there should be no noise whatever in the vicinity of the patient. Many causes, especially the age of the individual, alter the intensity of the sound; in children, for instance, it is very sonorous and even noisy. In them we seem to hear the dilatation of all the air-cells to their full extent; whilst in adults, the dilatation seems to be but partial. In a few persons, the respiration always resembles that of children, and hence it is named *puerile*, in whatever age it may be met with. In some morbid states the breathing becomes puerile.

Where we can perceive the respiratory murmur distinctly, and uniformly in every part of the chest, we may be assured that there is neither effusion into the cavity of the pleura, nor infarction in the substance of the lungs; and, on the contrary, when in some particular point respiration cannot be distinguished, it may conclude that the corresponding portion of the lungs within is become impermeable to the air. This failure of respiration is found to be a principal distinctive sign of peripneumony, pleurisy, hydrothorax, and all other diseases which impede the natural action of the lungs.

The natural sound of respiration is modified by being combined with other sounds in morbid states of the lungs; and such modifications have been denominated the *rattle*. For a description of the *crepitous*, *muçous*, *sonorous*, and *sibilous rattle*, we refer the reader to the work itself.

The action of the heart, as explored by the stethoscope, is studied under three different relations, viz. of the *sound*, *impulse*, and *rhythm*.

In ordinary circumstances, the stethoscope, applied between the cartilages of the fifth and sixth ribs, at the end of the sternum &c., conveys to the ear a distinct *sound*, even where the pulse is very feeble or imperceptible. This, in the healthy body, is double, so that each beat of the arterial pulse corresponds to two sounds. One of these is clear and rapid, and corresponds to the systole of the auricles; the other is more dull and prolonged, and indicates the contraction of the ventricles. In a state of health, the sound of the contractions of the ventricles is heard no where so strongly as in the cardiac region: in certain states of disease it may be heard more distinctly in other places. The softening of the substance of the heart deadens the sounds of its contraction; as does also any impediment of the circulation. But it may be taken as a general fact, that the extent of sound is in the direct ratio of the thinness and weakness of the heart, and consequently, inversely, as its thickness and strength. The extent of sound is affected also by the size of the organ.

When the parietes of the heart are unnaturally thick, the *impulse* is usually so great as very sensibly to elevate the head of the observer, and sometimes to give a disagreeable shock to the ear. The more intense the hypertrophia, the longer time the impulse is perceptible. It is only felt during the systole of the ventricles. A strong impulse is the chief sign of hypertrophia; while dilatation of the heart is characterized by the absence of all impulse.

By the term of *rhythm*, is meant the order of the contraction

of the different parts of the heart, and the relative succession and duration of these, as perceived by the means of the stethoscope. But on these our limits will not permit us to enlarge.

The other modes of exploration, are mensuration, succession, abdominal pressure, and measuring the volume of expired air after a full inspiration. *Mensuration* consists in the comparative admeasurement of the two sides of the chest by means of a cord or piece of tape, transversely from the spine to the sternum. This indicates two conditions of the chest; dilatation and contraction, and may assist in forming a diagnosis. *Succession*, of which Hippocrates is considered to have been the author, consists simply in shaking the trunk, smartly and quickly, with the view of producing the sound of fluctuation when a fluid is accumulated in the chest: *abdominal pressure*, when applied beneath the short ribs, produces a painful suffocative feeling in peripneumony, with copious effusion into the chest; and when made in the præcordia, it has the same effect in dilatation of the heart, pericarditis, &c.; but, in general, it is little to be depended upon. *Measuring* the quantity of air inspired, which was first proposed by Mr. Abernethy, must be considered as highly important and ingenious; and it is by no means a matter of difficult execution; yet it may be doubted whether it be well adapted to weak lungs.

We now proceed to the consideration of the author's cases, thirty-nine in all, to which we despair of doing any thing like justice.

*Case 1.*—A blacksmith, aged thirty. The disease, hypertrophia with dilatation of the heart. Diseased valves. Dilatation of the aorta. Peripneumony. The affection of the heart seemed to be evident without the stethoscope; and that instrument failed to detect the peripneumony, in consequence, our author thinks, of the overwhelming action of the heart. Blood-letting was the only remedy in the least useful. The blood was not buffy. Dr. Forbes prognosticated death. If we except the peripneumony, he had formed a very correct judgment of the case.

*Case 2.*—A farm servant, aged sixty. Hypertrophia with dilatation of the heart in a moderate degree. Peripneumony and pleurisy. Dr. Forbes examined this man with the stethoscope only once; after which he ceased to be under his care. That instrument did not discover the peripneumony and pleurisy; but our author believes that they were of posterior occurrence. In this case the lips were slightly blue, and on dissection the foramen ovale was found open.

*Case 3.*—A strong day labourer, aged sixty-three. Dilatation and hypertrophia of the heart; which was predicted by

Dr. Forbes. The man apparently died of apoplexy, but the head was not examined.

*Case 4.*—A woman, aged thirty. Dilatation of the heart. Hæmatemesis. The case was complicated; but disease of the heart was evident without the stethoscope; nor was our author's prediction quite correct; the exploration, however, was made very imperfectly.

*Case 5.*—A shepherd, aged sixty. The common symptoms indicated disease of the heart or lungs; by the stethoscope—hypertrophia, with dilatation of the heart and valvular disease. Prognosis, death. In this case our author was disposed to rely on the certainty of his diagnosis; but no dissection was made.

*Case 6.*—A labourer, aged forty-eight, about twenty years ago had a complaint of the chest, following a rheumatic fever, with inflamed joints, &c. Within the last two years there is habitual dyspnœa, irregular pulse, or a somewhat purple colour of the cheeks. The heart is felt pulsating very distinctly in the epigastrium. Blood-letting invariably gives him relief; the blood always buffy and cupped. This man was examined by the stethoscope on the 27th of August, 1822; a few weeks after the removal of anasarca of the lower extremities by digitalis.

"The following," says Dr. Forbes, "is the note of this exploration in the Dispensary Journal:—

*The Heart.*—"Action extremely irregular—a great many short and quick contractions of the ventricles, being followed by one or two slow ones: contraction of the auricles little perceived. *Impulse* moderate, perhaps somewhat more than natural. *Sound* perhaps not any thing more than natural, in degree, but there is, every now and then, to be heard a *silvery* sound, somewhat like the tone of a very faint bell; but there is no thrilling nor vibratory sound or sensation to be discovered. Palpitation having been excited, the impulse was found to be considerably increased; but even then, both the shock and sound were confined to the very region of the heart, being imperceptible along the upper half of the sternum, and hardly observable under the left clavicle.

"*Respiration* very audible over all the left side anteriorly, except in the cardiac region; highly *puerile* under both clavicles; *very indistinct* over the lower half of the right side, yet still distinguishable, and more so posteriorly; distinctly audible over all the back on both sides, but weak in the lower half, and very strong (*puerile*) over all the superior part. There is no *rattle*. [The patient examined in a sitting posture.]"

The second examination was made on the 21st of January, 1823, after severe dyspnœa and pain in the lower part of the left side. The following is the note of the exploration:—

*Respiration.*—"Puerile on the superior part of the left side an-



teriorly, and accompanied by a very loud, sonorous, rattle, evidently dependent on the presence of mucus, as it is always lessened in any particular point, and often removed by coughing and the act of expectoration. The sound of respiration, on this side, becomes gradually weaker in descending, and at length becomes very indistinct about an inch below the nipple, over all the inferior part of the chest anteriorly; laterally, and on the back, the line of indistinctness rises higher, insomuch that the sound of respiration is very insignificant over the whole of the lower parts of the back. Over a space of about two inches broad along the spine it is more distinct, and becomes much more so on the superior parts of the chest; still it is not puerile as on the anterior parts. On the right side the respiration is no where puerile, although I think it can be distinguished every where, except on the inferior parts. There is no rattle observable on this side.

"Impulse of the heart is perhaps somewhat greater than natural in the region of the heart, but the range of sound is not extensive, being inaudible over all the back, and only slightly audible on the right side anteriorly.

"[The character of the sound in the cardiac region, and the rhythm of the heart is not noticed.]"

The man died in June following. On dissection, the heart was found rather larger than natural.

"The mitral valve was completely altered both in form and structure; the different points of which it is composed being all coherent, and of a fibrous or semi-cartilaginous texture. The auriculo-ventricular orifice was, in consequence, greatly contracted. It was perfectly round, with a thick, smooth lip, and admitted, with difficulty, the point of the fore finger. The aortal valves were sound.

"The right lung was universally adherent to the parietes of that side of the chest; in its structure it was more solid than natural, but not hepatized, and contained a great deal of serous fluid. The left lung was no where attached by disease to the neighbouring parts; it was quite sound in its texture internally, except that it also contained a morbid proportion of serum. The pleura, on this side, contained about half a pint of serum."

Dr. Forbes had given the following *diagnosis* of the case after the first exploration:—

"*Disease of the Heart: Not Hypertrophia—nor Dilatation—nor Valvular Disease? probably Hydropericardium, and perhaps chronic disease [meaning pleurisy] with water effused in the inferior parts of the Pleura?* This note I took with me to the examination of the body after death, with the addition of the word "*Peripneumony*."

The case is styled Contraction of the mitral orifice. Slight dilatation of the heart. Chronic peripneumony. Anasarca of the lungs.

**Case 7.**—A carter, aged forty, March 14th 1823. His complaints began about eight years ago. Organic disease of the heart, “monstrously strong pulse.”

*“Stethoscope.*—Pulsation of the carotids most distinct and strong, and conveying a well-marked thrill to the finger, and a very loud grating sound by the stethoscope. *Impulse* of the heart very great in the cardiac region; *sound* very low, and hardly at all possessing the natural alternations indicating the successive contractions of the auricles and ventricles, but rather a *continuous murmur*, interrupted, occasionally, by a louder and harsher sound—but still very low. Under the right clavicle, and about the top of the sternum, the sound of the contraction of the ventricles is more distinct, and the grating sound as the contraction terminates, is very distinct—indeed very loud, and perhaps louder at the scapular extremity of the clavicle than at the sternal. Sound quite as loud under the sternum as immediately under the region of the heart.” Prognosis, death within half a year.

October 10. “Has continued in the same state, going to his work, as a carter, several days every week. He has a constant sense of weight and oppression in the region of the heart; and this sense of oppression and obstruction is every now and then (as often as once in two or three days) suddenly aggravated to a most violent and overpowering degree, causing him instantly to stand still, and being accompanied with great dyspnoea, and aching in all his limbs. Can only lie with his head high, and most easily on his back. There is now slight anasarca of the legs, and the whole body is leucophlegmatic.” He has been bled frequently through the summer, sometimes so often as twice a week.

November 17. “Anasarca much increased. For some time he has hardly been able to lie down in bed. Without any previous warning, he was this day seized with hemiplegia of the right side and loss of voice. He died on the 11th December. The body was examined the following day; and, previously to the dissection, our author read the following diagnosis of the case:—“*Hypertrophica, with dilatation of (one or both) the ventricles. Contraction of an orifice, or degeneration of the valves (mitral or sigmoid) of the left side. Dilatation of the arch of the aorta. Hydrothorax of the left side. Hydropericardium.*” The real state of the case was: “*Hypertrophica of the right ventricle. Hypertrophica, with dilatation of the left. Ossification of the sigmoid valves. Dilatation of the arch of the aorta. Pleuritis and peripneumony of the left side.*” Upon the whole this is a case which puts mediate auscultation in a very favourable light. We regret that we have not room for our author’s ingenious remarks on the action of the heart after the paralysis had supervened.

**Case 8.**—An ex-soldier, aged 40, had long complained of severe cough, and occasionally of violent pain across his chest. His

pulse was regular. The following is a note of the exploration made with the stethoscope three weeks before his death :—

“ *Action of the heart regular ; impulse considerable in the region of the heart ; sound louder than natural in the same place and as low down as the angle of the short ribs, also towards the sternum ; most audible with the open stethoscope ; both the sound and pulse perceptible at the very extremity of the xiphoid ; sound perceptible over all the right side (anteriorly), but not very loud—more so in the middle than under the clavicle ; about the nipple (right) and below it there seems to be impulse as well as sound. Respiration audible over the greater part of the left side (anteriorly ; ) attended, in the vicinity of the heart and under the clavicle, with a dry, sonorous rattle, very loud ; puerile under the clavicle, and extremely puerile, and without any rattle, under the sternal extremities of the 2d and 3d ribs ; very indistinct over all the right side, yet still in some degree perceptible in most places, and where perceptible, accompanied by a slight crepitous rattle. Pectoriloquism not explored, except under the left clavicle, where it is wanting.*”

The following was our author's DIAGNOSIS, which he read previously to the dissection :—

“ *Dilatation with Hypertrophia (slight), especially of the right ventricle : heart otherwise natural ? Left lung sound, especially in the superior lobe. Inflammation and consequent consolidation (in a considerable degree) of the greater part of the right lung. Larynx or Trachea diseased, and affecting the œsophagus ?*

Dissection ascertained that there was complete adhesion of the pericardium of the heart.—Ossification of the pillars of the mitral valve.—Chronic peripneumony of the right lung.

This case shews the much greater difficulty which attends a correct diagnosis of the diseases of the heart, than of the lungs.

Case 9.—Mr. N—n, aged 40, has been subject all his life to indigestion. Two years ago he began to be affected with fits of breathlessness and palpitation, and at the same time had a severe cough. Blood-letting has given great and immediate relief. We regret that we have not room for the particulars of this very interesting case. In the latter days of his life, the patient suffered dreadfully from oppression in the cardiac region ; but at no time was he in the habit of starting suddenly from sleep. Before death he was considerably anasarcaous. To the gentlemen who attended the dissection, Dr. Forbes read the following diagnosis, as he had formed it by several explorations with the stethoscope :—

“ *Hypertrophia with dilatation of the heart, especially of the right side ; both in a moderate degree. Hydrops Pericardii ? Pleu-*

ritic inflammation and serous effusion of the left side } Dissection gave enlarged heart, pericarditis, pleuritis.

Case 10.—Miss H. P., aged 21. She was affected with dyspnœa, dry cough, and almost constant palpitation of the heart. The pulse quick, small, and sharp. The complexion very pale, and the lips somewhat blue. For some days before death, the stomach was extremely irritable. Dissection ascertained, that there was hypertrophia with dilatation of the left ventricle,—dilatation of the right ventricle,—pericarditis,—hydrothorax.

“The application of the stethoscope” says Dr. Forbes, “in this case was so very imperfect and unsatisfactory, that it may almost seem misplaced in this collection. Its pathological interest, however, would make it worthy of being recorded, even if it bore no relation to the subject of auscultatory diagnosis. But this is by no means the case—since it will be found, on examination, that even the brief and superficial exploration instituted, if not sufficient to establish a clear diagnosis, was, at least, sufficiently corroborative of the fidelity of the stethoscope as a diagnostic guide. From the correctness of the results obtained, I think it may be safely inferred, that a fuller exploration would have produced a proportionate extent of knowledge. I shall only at present make one or two brief comments on the coincidence of the signs furnished by the stethoscope, with the appearances on dissection. (The general history of the case suggests some important practical reflections, which I cannot now notice.)—The great enlargement of the heart was sufficiently indicated by the extension of the sound over every part of the chest: while the moderate degree of impulse coincided sufficiently well with the state of the ventricular parietes observed on dissection. The sounds of the heart’s contractions were clear and of the natural character in every respect, except as to intensity; accordingly, it was found, that the orifices and valves (the degeneration of which is the chief source of foreign sounds) were in a perfectly natural state. The strongly-marked *puerile respiration* observed under the clavicles, clearly pointed out the existence of obstruction of a considerable portion of the lungs, from some cause or other. The appearances on dissection satisfactorily showed the nature and extent of this obstruction; which, I think, would have been easily discovered during life, by even a single complete examination of the chest, either by the stethoscope or percussion.

Judging from my own experience, I am disposed to consider this sign of *puerile respiration*, when existing only partially, as one of great value in practice. It is one that is more readily and easily discovered than almost any other; and I think its indications are as much to be depended on. Its presence, in any one part of the chest, may, I think, be safely considered as pointing out the obstruction of a considerable portion of lung in some other part. To

be sure, it affords no means of enabling us to judge of what nature, or in what place, this obstruction may be, but the certainty that obstruction exists is often of great importance.

"For instance: if in any particular case, while hesitating in our opinion whether a patient has water in the chest or not, or copious pleuritic effusion or not—or schirrus of the lung or not—&c., according as the common symptoms may lead us to infer in each case respectively:—if, on applying the stethoscope beneath the clavicle, we find, or do not find, *puerile respiration*, I think we are almost justified in making up our mind at once respecting the presence or absence of the morbid state in question. At least I have no hesitation in giving it as my own opinion, that this sign is infinitely more to be depended on than any of the common symptoms usually trusted to in such cases. And, for once, the sign is as readily learnt as the symptom; since this particular application of the instrument is not more troublesome, to either the physician or patient, than feeling the pulse or examining the tongue, and scarcely requires more time. More than once, when for want of time or other reasons, I have been unable to explore the chest thoroughly, I have been enabled from this sign alone, not merely to form a correcter diagnosis, but to institute a more appropriate practice, than I could have done without its aid. More than one instance of this kind, especially in cases of symptomatic hydrothorax, is given in the present volume."

Case 11.—(*supposed*) Chronic pericarditis.

Case 12.—(*supposed*) Dilatation of the heart from contraction of one of the valvular orifices.

Case 13.—(*supposed*) Original debility [extenuation] of the heart.

Case 14.—Angina pectoris, from (supposed) weakness of the parietes of the heart. (Nervous or spasmodic angina.)

These four cases are highly interesting, and the symptoms are detailed with great accuracy and minuteness; but as none of them had proved fatal at the time when Dr. Forbes published, we shall take no notice of any of them but the last, the case of Thomas Ide, a labourer, aged 37. This man had enjoyed good health till about nine years ago, when he began to have the following symptoms, which have troubled him more or less ever since:—

"A constant disagreeable sense of fluttering at the pit of the stomach, perceptible, but in a very slight degree, while in a state of quiescence, or gentle exercise, and at times instantly aggravated to a violent degree of beating, on using any severer bodily exertion. At these times the palpitation is attended with very great dyspnoea, and a universal and overpowering sense of feebleness and faintness. This description comprehends the whole of his uneasiness in the paroxysms, which have never come on but during bodily exertion. Severe labour of any kind, quick walking, or going up stairs with

even moderate speed, will bring these on at any time. He has scarcely any other complaint."

The stethoscope gave the following results :—

"*The Heart.*—No impulse whatever in the cardiac region or elsewhere. Sound in the cardiac region remarkably distinct\*, but not particularly loud—the respective contractions of the auricles and ventricles unusually definite, and divided by a considerable interval of repose. Rythm and sound perfectly natural. Sound audible over all the chest ; very distinct over both sides anteriorly, and nearly equally so ; perceptible, but in a very moderate degree, on the back, and nearly equally so on both sides. The sound is perhaps as loud along the whole length of the sternum as in the region of the heart, and louder than under the left clavicle. Under the sternal extremity of the left clavicle, the sound is particularly clear, though not remarkably loud, the sound of the contraction of the *auricles* is, in particular, distinct and clear—much louder than that of the ventricles, and clearer than is usual. It would appear, also, that the interval of repose, between the contraction of the auricle, and the subsequent contraction of the ventricles, is longer than usual (the pulse is 60.)

"*Respiration* not much explored, but it is very low generally, except on voluntarily quickening the inspirations, when it is sufficiently audible, and of the natural character, wherever it was tried.

"The only medicine I prescribed for this man was a pill consisting of extract : colocynth. c. gr. ij, ext. hyoscyam. et. pil. hyd. ā ā. gr. iss. ipec : gr. ss.—(ij. h. s. quotidie.) These pills he continued to take for several months, and considered himself as *remarkably* benefitted by their use.

"This is another good instance I conceive, of that numerous and distressing class of diseases which depend essentially on no other organic alteration than an unusually thin, or, at least, slightly dilated, and consequently weak state, of the ventricles of the heart. This condition of the organ is, as I have formerly observed, generally congenital, and predisposes to, and lays the foundation of many diseases, not only of the heart, but of the system *generally*. According to the particular nature of the exciting causes—their frequent or rare application, &c., whether bodily labour—mental anxiety—high-living, producing other diseases, such as dyspepsia, nervousness, &c. &c.; the native debility of the organ will be either stimulated into organic change, or will assume such violent derangement of function, as will emulate in severity, some of the most distressing of organic diseases. It is, I conceive, under such a state of things that these numerous cases of *Angina*, which do not prove speedily fatal—that is, which are not mere symptoms of organic disease of the heart—arise : And their origin is readily explained, since it seems to follow, as a natural consequence of structure, that an organ which is preternaturally weak,

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\* " This is no doubt owing greatly to the slowness of the pulse."

and at best inadequate to the due performance of its functions, should more readily suffer from morbid causes, than one that is vigorous.

"A preternaturally weak heart, that is, a heart whose muscular power is disproportioned, more or less, to the due impulsion of the blood through one or both circulations—the lungs and system generally—must be, and I believe is, the fruitful primary source of many disorders; and must, and does, modify, in a greater or less degree, almost all other diseases. A weak heart will necessarily occasion a languid circulation—a superabundance of blood in the veins generally, and in some parts of the system especially.

"The connexion of apoplexy with diseases of the heart is generally known; but I believe the influence of the very common congenital weakness, of which I am now speaking, in producing headache and other cerebral diseases, is but little attended to. I am, however, convinced by experience, that this influence is a very general and a very powerful one.

"To judge from the history and general symptoms of Ide's case, one might be disposed to consider his disease to be as much an organic affection of the heart, as many others recorded in this volume, which certainly are so.

"The symptoms are, at least, apparently as severe as those of Mr. N.'s (Case 12); and yet, if the indications of the stethoscope are to be depended upon, the importance of the two diseases is very different, and the result will probably be also very different.

"In the present case, mediate auscultation points out no organic disease, unless it be the general thinness of the ventricular parietes, which unquestionably predisposes to serious and fatal disease (dilatation), and would probably lead to it, under the constant stimulus of bodily labour, but which, under more favourable circumstances, and with due care, does not necessarily prevent the enjoyment of a moderate share of health, or even the attainment of longevity. In the other case, on the contrary, there exists (I presume) a morbid growth, which in its nature and from its situation, is almost certainly progressive, and which eventually, in defiance of all skill and care, must lead to inevitable death. In both these cases, it is probable that the cause of the paroxysm is the same, viz. the presence of a quantity of blood in the heart, too great, relatively to the powers of the organ, to transmit it; but in the one case the obstacle arises from the mechanical obstruction of the orifice through which it is to be propelled; while, in the other, it is the consequence of inadequate force in the propelling agent."

Case 15.—Miss —, aged forty-three. Sympathetic Angina pectoris: known to be so by the stethoscope pointing out no organic disease. In this case the bowels were torpid, and the appetite impaired, and the patient had suffered much mental anxiety. She was enjoined to absolute rest in bed, an alterative pill was prescribed, with a stomachic bitter draught; and this plan was productive of great benefit; however, it was many months before

she got well. It is the opinion of Dr. Forbes, that such symptoms, in such a constitution, are the frequent forerunners of organic disease.

*Case 16.—(supposed)* Dilatation of the heart with contraction of an orifice.

*Case 17.—(supposed)* Hypertrophia with dilatation of the heart and contraction of an orifice.

*Case 18.—(supposed)* Hypertrophia with dilatation of the heart.

*Case 19.—(supposed)* Valvular disease with dilatation of the heart. Pulmonary catarrh.

The ordinary symptoms, in all the four cases, indicated very serious disease of the chest; and in three of them the heart was evidently diseased; though the stethoscope almost added *certainly* to *supposition*. But none of the patients having died, the test of dissection is still wanting. The prognosis is death in two years at farthest.

This case, in which Dr. Forbes, without the stethoscope, would not have dared to prognosticate death, is one of those manifold affections usually classed under the comprehensive name of *asthma*.

*Case 20.—*Aneurism of the aorta; no way elucidated by the stethoscope.

*Case 21.—*Jane Groves, aged sixty. Cough and dyspnœa: the latter at one time much aggravated daily at three o'clock in the morning. Inability to lie down in bed; scanty urine; pulse very quick and irregular; the lips blue; the whole surface leucophlegmatic, and the legs œdematous.

"The *stethoscope* was, for the first and only time, applied to the anterior and lateral parts of the chest, as she lay in a semi-recumbent posture. The following are the results obtained: *respiration* puerile over the upper part of the left side anteriorly, as low as the middle of the mamma; audible, in a slight degree, below this, anteriorly, and also considerably lower on the side, but rather by means of a very slight *rattle* during inspiration, than by the regular and natural hiss of the breath (it is not perceptible during expiration): in no point of the lower half of the chest, is the sound of respiration one-sixth part so loud or distinct as over the upper half. On the right side the respiration is puerile, but in a less degree below the sternal end of the clavicle, and is slightly audible as low as the nipple, but not at all perceptible below this anteriorly, or laterally. There is no *rattle* on the superior parts of the left side; but there is a considerable mucous rattle, frequently obstructing the respiration in different points of the right side. [The patient expectorates a considerable quantity of mucus.] The *circulation* was not properly, indeed hardly at all, explored. It was,



however, noted that the sound of the heart was not perceptible (with the open stethoscope, which only was used) at any distance beyond the cardiac region, and that the rythm was very irregular.

"Percussion was applied only along the sternum; and it was found that the sound was decidedly, and very considerably, duller over the lower third of this bone.

DIAGNOSIS.—"*Hydrothorax of both sides (symptomatic of diseased heart?)*—*Peripneumonic engorgement of the lower left lobe?*"

On dissection, the case was ascertained to be symptomatic hydrothorax; hypertrophia with dilatation of the left ventricle; slight (recent) pleurisy.

Case 22.—May 2d, 1823. Mr. G——, aged forty-three, had lived in the West Indies, and had suffered from a slight liver disorder. Last November was attacked by an affection of the chest; there was no pain but extreme oppression and dyspnoea, and dread and horror of impending suffocation, and palpitation of the heart. These symptoms returned in paroxysms, but were not brought on by walking or other bodily exertion. The pulse, before and since, has been very irregular. Within the last eight days he has had a very severe paroxysm, and at times is quite unable to assume the horizontal posture; being always easiest when sitting and leaning forwards. He has a countenance of extreme anxiety. His eyes are bilious, his precordia prominent, and his tongue coated.

"With the stethoscope, the action of the heart seems moderate in respect of impulse and sound, but extremely irregular: there appears to be a great number of imperfect contractions of the ventricles, followed, at long intervals, by one that is pretty full and strong. The sound of the heart's contractions is very audible under the xiphoid, and, in a slight degree, along the lower half of the right side. It is little perceptible under either clavicle, and not at all on the back. There is nothing unusual or unnatural in the character of the sound, independently of the rythm. Respiration is extremely puerile wherever it is heard, viz. over all the superior parts of both sides anteriorly (the patient being in the sitting posture); not audible below the nipple on either side (anteriorly), especially the right; it is also puerile on the back, even in the lower parts, when the patient leans forward, and, while in this posture, the sound of respiration can be distinguished lower on the axillary face of the right side, than when the body is kept erect. There is no rattle.

DIAGNOSIS.—"*Hydrothorax; perhaps also hydropericardium; enlarged liver.*"

"I prescribed V.S. ad unc. x. vel. xij. (with the view of procuring temporary relief), a blister to the region of the heart, a pill consisting of three grains of blue pill and half a grain of pulv. digital. every night at bed time, and half an ounce of the infusion of digitalis every sixth hour.

"The benefit obtained by these means was very speedy, and most striking."

In this case, there could be little doubt of the existence of water in the chest; but the fact was ascertained by the stethoscope. The hydrothorax here was most likely symptomatic of organic disease; but if we could believe it to have been the primary affection, there is no reason to despair of ultimate recovery. May, 1824, Mr. G. still continues in tolerable health, but he is by no means free from his disease.

Case 23.—Of the same kind as the last, but with more decided marks of diseased heart.

Case 24.—"John Luffe, aged 66, ex-coachman, affected a year and a half with dyspnoea, greatly increased by motion of any kind, also with a frequent cough, attended with a good deal of expectoration. During the last two months his lower extremities have been œdematous, and he is now considerably anasarctous over the whole body. Since the appearance of the œdema, the urine has been very scanty and sedimentous. The pulse is very irregular. He has no pain. The stethoscope gives puerile respiration over all the right side, but detects no respiration whatever on the left side, before and behind. Percussion gives similar results, eliciting a distinct clear sound from the right side, and a dull fleshy sound from the left. Action of the heart not examined.

"Diagnosis. *Hydrothorax of the left side.*

"Prognosis. *Speedy death.*" He died suddenly four days after the examination. "The body was not allowed to be examined after death; but, after much intreaty, permission was granted to tap the chest. A lancet was, accordingly, passed into the thorax, through one of the intercostal spaces of the left back, about two inches from the spine, and under the lower angle of the scapula. A stream of limpid serum immediately issued from the puncture, and continued to flow until three or four pints were discharged. This fluid partially coagulated on the application of heat. Punctures were made into the right back, in different points, both above and below the place of the incision on the left side, but not a drop of fluid of any kind was discharged." This is a case very favourable to mediate auscultation and percussion.

Case 25.—"Mr. A., aged 37, (supposed) Idiopathic Hydrothorax. The general symptoms are detailed at considerable length.

"The stethoscope applied to the anterior parts of the chest, gives the following results: *respiration* very distinct and very loud (puerile) over all the right side, and strongly puerile under the clavicle, without any rattle; *inaudible* over all the left side, except immediately under the clavicle, where it is perceptible in a slight degree. No *apex* whatever from the heart; *sound* in the cardiac region dull, and as if distant from the parietes of the chest, perceptible, in a moderate degree, over all the right and left side: *rhythm* natural,

and no foreign sound perceptible. Back not explored. Hægophorism not sought for." The patient died a short time after the exploration. The body was not allowed to be opened.

"The above," says our author, "is one of the clearest examples of hydrothorax that I have ever met with; and one which I am disposed to look upon as idiopathic, and therefore, as a very rare disease. Although there were certainly many reasons for inferring the presence of water in the chest, in this case, from the general symptoms, yet I hope I am not throwing any undue discredit on the common means of diagnosis, when I give it as my opinion, that the precise nature and extent of the disease could not have been ascertained by the general symptoms only. Both these important points were immediately ascertained by the stethoscope; and if this knowledge was productive of no benefit in the treatment, this cannot be considered as any defect in that instrument. On the contrary, I have a strong conviction (alas too late!) that that instrument did point out most clearly a means of treatment, which, if adopted, might have afforded some prospect of saving the patient's most valuable life—I mean *paracentesis of the thorax*."

Dr. Forbes thinks that in this case there was every reason to anticipate a happy result from the operation.

"In admitting its propriety in such cases, it is obvious," he says, "that the stethoscope becomes of the utmost value in pointing out the place of incision. In the present case, indeed, I think *percussion* would have answered nearly the same purpose; but without one or other of these means, I have no hesitation in saying, that in making the incision, the operator might have been equally justified in thrusting his trocar into the right side where there probably did not exist one drop of fluid, as into the left which was full of it!

*Case 26.*—Anasarca of the lungs—hydrothorax. In the diagnosis of this kind of anasarca, the stethoscope, as is confessed by Laennec, affords only partial assistance; but the presence of water in the right cavity of the pleura, was indicated by the usual sign of the absence of respiration.

*Case 27.*—Hydrothorax. The body was not opened.

"There seems," says Dr. Forbes, "little reason to doubt that the above was a case of hydrothorax, although the most unequivocal test was not applied. I detail it principally with the view of pointing out how the stethoscope, even when very imperfectly applied, may become a faithful index of the state of the pectoral organs. In my first examination of this case, in addition to the absence of the respiratory sound over the inferior parts of the chest, the respiration is stated to be (as it usually is in such cases) puerile under the clavicles. At the subsequent exploration of the 29th, when, from the general symptoms, there could hardly be any doubt of the diminution of the water in the chest, the cylinder discovered the respiration over the superior parts of the chest (where only it was applied) to be *much less puerile*, than it was formerly; thereby

clearly indicating, by this simple change, that the effused fluid actually was lessened."

*Case 28.*—Mr. J. S. aged 30, a professional gentleman. Chronic pleurisy. Dilatation of the heart. This very interesting case, which terminated fatally, is detailed at great length; but we must confine ourselves to the exploration, the author's diagnosis, and the post mortem appearances. These certainly place the stethoscope and the diagnostic fact of Dr. Forbes in a very favourable light.

December 16, 1822. "Yesterday," he says, "I applied the *Stethoscope* for the first time. The sound of respiration was found to be unnaturally distinct (*puerile*) over all the left side of the chest, before and behind, and extremely indistinct, indeed scarcely perceptible, on the deepest inspiration, over the whole of the right. There was no *rattle*. Impulse and sound of the heart rather great in the region of the heart, and the sound very distinct over all the right side anteriorly.

DIAGNOSIS. *Pleurisy of the right side with copious effusion.*"

March 5, 1823. "*STETHOSCOPE.* Respiration still *puerile* over all the left side before and behind, except in the region of the heart, where it is entirely absent. It is now also perceptible over the whole of the right side before and behind, but the sound is *very slight indeed* compared with that of the left. It is less in the superior parts, immediately under the clavicle, than lower down, but is not at all audible a couple of inches below the nipple. On this side the sound of respiration is not perceptible, as is usual, through the whole process of inspiration—a considerable part of the expansion of the chest taking place without any. There is no rattle on either side. *Pectoriloquism* exists no where; but there is a very marked difference between the two sides while the patient is speaking; there being a loud, clear, and thrilling sound on the right, which is hardly at all perceptible in any part on the left side: still there is no *transmission* of sound by the stethoscope, but merely *resonance* under it. (Is this *Hæmophonism*?) Percussion does not occasion the least uneasiness in any part, although performed with no feeble hand. It elicits a very dull sound over all the right side, and a clear one over all the left, except in the region of the heart. Action and rhythm of the heart quite natural, only quick; impulse in the region of the heart, perhaps unnaturally great, and the sound very loud. Sound of the contractions very distinct over the whole of the chest anteriorly, and quite as distinctly on the right side as the left; perhaps more distinct under the lower half of the sternum, and between it and the right nipple, than in the very region of the heart;—not perceptible in the back (through the clothes.)

October 21. "*STETHOSCOPE.* Respiration as when last explored, on a very superficial trial. Much less distinct under the outer end of the right clavicle.

*Heart.* "Sound, and perhaps impulse greater than natural, certainly

considerably so, when compared with the feebleness of the pulse; and quite as audible on the right side as on the left, or more so,—decidedly more audible under the right nipple, than on the outer side of the left chest, or indeed on any part of that side. No irregularity of rhythm or peculiarity of sound. *Percussion* elicits a dull sound in the cardiac region, where respiration is not at all perceptible.

“From this time he got gradually weaker and more breathless, but without any cough or expectoration, and died on the 12th of November.”

The body was examined next day. Previously to the dissection, Dr. Forbes read the following note of the *diagnostics* to the gentlemen attending:—

“(J. S.)—*DIAGNOSTICS*.—Dec. 1822. Pleurisy of right side, with copious effusion.

1823, March. Pleuritic effusion of right side still great but diminished.

April 7th. Same results—no increased absorption of fluid, but rather the contrary.

June 21st. Attack of pleurisy of the left side, with considerable effusion, and compression of the lung, but less than on the right side; absorption of part of the fluid on the right chest.

July 30th. Considerable absorption of fluid on both sides, but still a good deal on the inferior parts of both; probably adhesion has taken place over the greater part of the *right side*, between the lungs and pleura costalis, except on the inferior lobe.

Sept. 27th. Has had a fresh attack of inflammation,—I think peripneumony, and also a fresh pleurisy of the left side:—Left lung thickened and partially hepatized. Absorption of fluid of right side goes on, and adhesion and development of upper lobes on right side increased.

Oct. 20th. Much as before. Hepatization of the outer part of the right superior lobe?

“*POST MORTEM*? Serous or sero-purulent effusion in both sides,—*most* on the left, but on the right *thickest*,—adhesion of the lungs to the pleura wherever there is no effusion—e.g. the greater part of the right lung, and the upper lobe of the left probably. *Carnification* (See *Lacnec*) of both lungs in different parts and degrees:—hepatization of outer part of right superior lobe, and also of left ditto. False membranes and cheesy crusts on different parts of pleura. Some Tubercles?—*The Heart*. I am somewhat at a loss how to state my *expectations* respecting the state of this organ. There is no *internal* structural disease, but I think it is very likely that there is either effusion into the pericardium, or adhesion of this [membrane] to the heart, from inflammation. I expect also that the cavities [of the heart] are enlarged. Some reason must be found for the sound, and also impulse, being so very perceptible on the *right side*; but this may arise from many causes, besides the

dilatation; such as the *natural narrowness* of the patient's chest, the induration of the right lung and its firm adhesion to the side, disease of the exterior of the heart or its membrane; or the pressure of fluid in the left cavity of the chest.

"DISSECTION.—*External appearance.*—Body considerably, yet not extremely emaciated. The right side of the chest is more flattened about the middle, and has rounded generally than the left, yet there is no sensible difference between the two on mensuration.

"On laying back the sternum, and the cartilages of the ribs attached to it, the edges of both lungs were found adhering all along the sternal extremities of the ribs on both sides, so as entirely to close both cavities of the pleura. The greater part of the exposed space was filled by the heart and pericardium, which occupied the centre of the breast, and extended quite as far on the right as on the left of the middle of the sternum, the extreme point of the pericardium lying exactly under the right nipple. The pericardium was not tense, and contained about five ounces of a straw-coloured limpid serum. The membrane was of its usual thickness and exhibited no mark of inflammation or other morbid alteration on any point of its surface. The heart was considerably larger than the closed hand of the individual, and was estimated by us as being one-third above the natural size. It was flattened and flaccid, and somewhat rounder and blunter at the apex than is usual. The right auricle was turgid with blood, and seemed therefore much larger than the left, but on examination there was no very obvious difference of size. The increased size of the heart was owing principally to simple dilatation of the cavities, although it was not found that there was (as is usually the case) either a proportionate extenuation or thickening of the ventricular parietes. On the contrary, these appeared of a thickness proportioned to the extent of the cavities, according to the ratio of the natural heart. The substance of both ventricles was flaccid, but that of the left was much softer than the right, yielding readily, almost like liver, to the pressure of the fingers. The parietes of the right ventricle varied in thickness in different parts (from one-third to one-sixth of an inch), being thinnest near the origin of the pulmonary artery; the parietes of the left ventricle were on an average less than double that of the right. The relative capacity of the two ventricles seemed natural. The walls of the left as well as the right collapsed on being cut. All the valves and outlets were perfectly natural.

On the *left side* of the chest the upper lobe of the lungs was closely adhering to the chest by its whole surface, while all the rest of the lungs was separated from the side by a serous effusion, and compressed against the mediastinum into a compact substance, of the thickness of from half an inch to an inch, the anterior edge of which was attached, as already stated, to the cartilages of the ribs. The cavity of the pleura contained about sixteen ounces of a serous fluid like that found in the pericardium, and was lined throughout by a false membrane of a whitish colour, of the thickness of from

a quarter to half an inch, and of a consistence varying, in different parts, from that of natural membrane to soft cheese,—the adherent surface being firm, and that in contact with the fluid soft and friable. The surface of this false membrane was rough, and gave origin to many soft bands which crossed the cavity from side to side. The upper lobe was considerably indurated throughout, yet could hardly be said to be hepatized. It answered to the state of parts called *carnification* by Laennec, or to his description of the first stage of peripneumony. It was more like red cellular substance than liver. It exuded, when cut, a frothy serum, and was very imperfectly crepitous. It was thickly studded with small hard tubercles, scarcely any of which were of the size of a pea, and few of the size of a barley corn, and not one containing any soft, much less fluid, matter. The lower lobes, compressed as already mentioned, were softer than the upper, and contained hardly any tubercles.

“The right lung was intimately and most firmly attached to the bounding parietes throughout every point. Of course there was no fluid. The adhesion was here every where strong and organized. The substance of the lung was considerably indurated, but more or less crepitous every where, except on the outer part of the superior lobe, where the induration was greater and the adhesions to the ribs firmer. When cut they exuded a frothy fluid. Including even the upper lobe, no part had a decided liver-like character. There were only a few small tubercles in this lung, and no appearance of pus in any part of the viscus. As the body lay on the back, flat on a table, the upper surface of the liver reached within an inch and a half or couple of inches of the nipple. The interspaces of the ribs were large on both sides, and equally so.

“The peritoneum contained a small quantity of serum. The liver was of the natural size, and, with all the rest of the viscera, perfectly healthy.

*Remarks.*—“This case is interesting on many accounts. It affords an instance, at once, both of the acute and chronic pleurisy, and of dilatation of the heart. It is one of that numerous class of affections which are falsely included by many practitioners under the comprehensive term of consumption. It exhibits a satisfactory exemplification of the utility of the stethoscope in establishing a just diagnosis. By means of this instrument, the progress of the pleurisy was correctly traced; as there can be no doubt, from the appearances on dissection, that the progress was really such as was stated in the notes of diagnosis recorded during the patient's life. The error respecting the supposed existence of fluid in the inferior parts of the *right* side (the only error in the diagnosis) was an error more of the observer than of the instrument; the latter justly showed the non-existence of respiration over the part in question, but the former falsely referred (*from theory*) this result to the compression of a portion of effused fluid supposed to be still remaining, in place of the natural encroachment of the liver.

"The same remark is equally applicable to the state of the heart. All the results of the stethoscopic examinations clearly indicated (according to Laennec) dilatation of the heart without extenuation of the parietes, and it is probable that this conclusion would have been at once adopted, without any hesitation, but for the obvious existence of other organic changes, which might possibly account for some of the results.

"Upon the whole, I think I may venture to hold up this case as affording an example of precision of diagnosis, not attainable by the ordinary mode of investigation, without the aid of mediate auscultation or percussion."

**Case 29.**—Chronic Pleurisy, with contraction of the chest. Fatal Peripneumony. The diagnosis was admirably assisted by the stethoscope; but permission was not obtained to examine the body. In this case there was a fine example of the contraction of the chest, so beautifully described by Laennec, as occurring in consequence of chronic pleurisy. Dr. Forbes is surprised that Mr. Shaw, in his excellent work on Diseases of the Spine, should doubt the accuracy of Laennec's account of this morbid state of the parietes of the chest; as this is not the only one which, within the last twelve months, has fallen under our author's notice.

**Case 30.**—Acute, ending in Chronic Pleurisy. Contraction of the chest. Prognosis bad; but the patient was still living, May 19, 1824.

**Case 31.**—After examining this case with the stethoscope and percussion, our author gave this *diagnosis*: chronic pleurisy, with copious effusion, of the right side. The *prognosis* was, death within the year. This was given on the 8th of March; the patient died on the 4th of July following. Previously to laying open the thorax, the point of a scalpel was thrust into the right side of the chest, when a stream of serum issued forth. The lung of the same side was as hard as a schirrous liver. This also Dr. Forbes suspected before death.

**Case 32.**—Pleuro-peripneumony. The patient was living when Dr. Forbes wrote; but he had predicted death, and had stated that there was copious effusion compressing the left lung. At the end of this case we have some interesting remarks on the history of the paracentesis of the thorax. Mediate auscultation and percussion alone can give authority for performing the operation.

**Case 33.**—Pleuro-peripneumony.

**Case 34.**—(Supposed) Chronic Pleurisy.

The patients, in both these cases were living when Dr. Forbes published; the first will die; the other probably will recover.



In the second Dr. Forbes formed his diagnosis before he applied the stethoscope, which however confirmed it.

*Case 35.*—Chronic Peripneumony. It terminated fatally, and dissection confirmed the diagnosis previously made. The ordinary symptoms, however, sufficiently characterized the disease. The peculiar respiration which attended it, and which seems to be a concomitant of chronic peripneumony, may be described as a variety of the *puerile*, only much lower, and abruptly cut short immediately after the commencement of each inspiration or expiration.

*Case 36.*—Chronic Peripneumony, without the usual symptoms. Its real nature was detected by dissection; but our author conceives that it would have been at once recognized by means of the stethoscope or percussion.

*Case 37.*—Pulmonary Catarrh or Bronchitis. In this case, the stethoscope indicated “very distinct respiration on the whole chest, before and behind, every where accompanied by a loud sonorous rattle, loudest over the right side, and heard chiefly in expiration. The patient, aged 50, got well in about twenty days, by means of V. S. blistering, and an aperient antimonial mixture.

*Case 38.*—(suspected) Emphysema of the Lungs. The patient, aged 52, had been dyspeptic for thirty years; and now, July 1, 1824, has dyspnoea, cough, expectoration, looseness, or slight soreness of the throat. The stethoscope showed a very peculiar condition of the lungs; and there being a clear sound on percussion, and the absence of the usual respiratory sound over the whole chest—the pathognomonic sign of *emphysema of the lungs*, given by Laennec—our author is disposed to consider the disease as an example of this little known, though probably not very rare, affection.

*Case 39.*—Asthma. The result of the stethoscope is here given, during the paroxysm, or the day after it, and during the patient’s ordinary health; and as in all the three states the sound of respiration is unnatural over the whole chest, our author thinks that it probably depends on *emphysema*, as in the preceding case.

The translation of Dr. Collins’ Essay on the Physical Diagnosis of Diseases of the Chest, from which we have already made an extract or two, closes the volume.

We have thus finished our Review of this valuable Work. Our account of it is necessarily an imperfect one, and will convey to the reader but a faint idea of our author’s merits; but our task, such as it is, has been executed with fidelity and care. We are inclined to think highly of the methods of diagnosis here advocated, and we have no hesitation in recommending the

present work, in the strongest manner, to the attention of practitioners. It is written in a style remarkable for its neatness and simplicity; such indeed as becomes a man of taste and education, and which is very rarely attained to by a person unacquainted with the ancient models of composition.

Quo semel est imbuta recens servabit odorem,  
Testa diu.———

Seeing then that the literary attainments of Dr. Forbes are of so high a class, we are rather surprised that he did not give at once, in his own words, a condensed view of Awenbrugger's work, and Corvisart's Commentary on Percussion, instead of merely translating them in their original and quaint form. But we are not disposed to quarrel with him on this account, nor for his use of words, such as sharpish, puruloid, sedimentous, &c., which probably are not pure English; little specks, like these, being lost sight of in the general brilliancy of his merits.

We observe that Dr. J. C. Williams, at the Edinburgh Graduation, in August, 1824, has published a Thesis de Stethoscopia, from which it appears, that the stethoscope has been used by Dr. Marsden, in the Nottingham Infirmary.

- ART. III.—1. *Pauli Mascagnii Anatomia Universa, XLIV. Tabulis æneis juxta Archetypum Hominis Adulti accuratissime representata, dehinc ac Excessu Auctoris cura ab studio. EQ. ANDRÆE VACCA BERLINGHIERI, JACOBI BARZELLOTTI et JOANNIS ROSINI, in Pisana Universitate Professorum, absoluta atque edita. Pisis, apud N. Capurro, 1824.*
2. *Discours prononcé à l'Academie des Sciences de Paris, le 26 Juillet, 1824, par STANISLAS GROTANELLI, Professeur de Médecine-clinique à l'Université de Sienne, et un des Collaborateurs à la publication de l'Anatomia Universa, PAULI MASCAGNI.*
3. *Lettre des Heritiers de feu Paul Mascagni à M. le Comte. Lasteyrie à Paris. Pise, 1823.*

We are particularly desirous of calling the attention, not only of our professional readers, but of the scientific world and the admirers of the fine arts in general, to the great work of which the title is prefixed to this article. In doing so, we are actuated by two motives, first by a feeling of admiration of the rare com-

bination of genius and industry, by which such a stupendous undertaking has been accomplished; and secondly, on account of some circumstances connected with its publication, of which, after an exposition of the facts, our readers will be enabled to form their own opinion. First, as to the work itself: It is unnecessary to say who or what Mascagni was: his great work on the lymphatic system, published so long ago as 1787, would alone have sufficed to perpetuate his memory. Far, however, from allowing the reputation he had acquired to paralyze his future efforts, he continued, with an assiduity of which in this country it is difficult even to form an idea, to prosecute the study of anatomy with the object of collecting materials for this his great work, and two others, presently to be noticed. These exertions were continued during a period of nearly thirty years, and were terminated only by his death, in 1815. After that event, various attempts were made to proceed with the publication, the whole of the drawings, and the major part of the engravings for which, were left finished by Mascagni, but were frustrated by causes to which we shall hereafter advert. In May, 1822, an arrangement effected, by which the whole property of the Great Anatomy of Mascagni was transferred to MM. Vaccà Berlinghieri, Giacomo Barzellotti, and Giovanni Rosini; and these gentlemen now stand pledged for the production of a work, certainly unrivalled in the annals of anatomical science.

Its object is to give a faithful representation of the various parts of the human body, of their natural size, in a subject of five feet five inches, Paris measure. The full length figure is represented in four different forms: the first exhibits the muscles, vessels, and nerves exposed on the removal of the integuments; the next, the second layer of muscles, with the corresponding vessels and nerves; the third, the subjacent layer; and the fourth, the skeleton. Of each figure there are two representations, the one containing an anterior, the other a posterior view. In addition there are fifteen plates of the viscera, besides other plates, containing forty figures, representing detached parts requiring special illustration. Of the whole work there were engraved and finished before the death of Mascagni, all the whole length figures, the skeleton excepted; twelve plates of the viscera; and almost all the figures of detached parts. Hence there remain to be engraved, six plates of the skeleton; three of the viscera; a few of detached parts; and almost all of the outline plates for the purpose of explanatory references.

The annotations left by the illustrious author are too concise and imperfect to serve the purpose of explanation. The professors of Pisa have therefore considered themselves fortunate in

securing the assistance of Hieronymo Griphoni, prosector in the University of Sienna, a favourite pupil of Mascagni, the companion of his studies, a witness of his observations, and his assistant during seven years, for the purpose of superintending the engraving of the outline plates, comparing them with the subject, and furnishing the necessary explanations. The nature and extent of the task this gentleman has undertaken may be estimated, when it is stated, that he was occupied for three months with a single plate, a complicated one of the viscera.

The editors propose to publish the whole work in nine fasciculi, containing forty-four plates; a fasciculus to appear annually until its completion, which, as the first was published in 1823, may be reckoned seven years from the present period. They pledge themselves for its completion, in the manner and time they have promised; and on the other hand, require an engagement from their subscribers to take their copies at the stipulated price as they are published. The price is for each fasciculus 120 francs; the explanatory references are 45 francs; so that the price of the whole when completed will amount to 1125 francs, about 47*l.* sterling. The expences of carriage are to be paid by the purchasers. A few copies only will be coloured, and of these the price will be 280 francs each fasciculus, or about 100 guineas for the whole work; a sum, which however large it may appear, is by no means disproportioned, if we may be allowed to form a judgment from the inspection of a single fasciculus, to the magnificence and importance of the undertaking.

We shall now proceed to say something of the circumstances to which we have already alluded. Our information is derived principally from the Letter addressed by the heirs of Mascagni to the Count Lasteyrie of Paris, on the occasion of the announcement of an anatomical work proceeding from his lithographic establishment, and professed to be the production of Dr. Antommarchi, whilst it is in fact nothing more than a lithographic imitation of the great work of Mascagni, made from a copy obtained for other purposes, and improperly held back from the legal owners. There does not appear to be any reason to doubt the authority of this statement, and it is farther confirmed by the fact, that though the letter was published more than a year ago, no answer has been given to it, either by Dr. Antommarchi or the Count Lasteyrie. In order to give a clear idea of the subject we must entreat the indulgence of our readers, while we lay before them some particulars connected with the conduct of Dr. Antommarchi.

At his death, Mascagni left behind him three works, viz. *Anatomy for Painters and Sculptors*; the *Prodromus* to the

Great Anatomical Work ; and that work itself. The publication of the *Prodromus* and of the *Great Anatomy* was undertaken by a private society at Florence, who engaged to pay 6,500 Tuscan crowns for them to the heirs of Mascagni. They commenced with producing the *Prodromus*, in the expectation that the profits arising from its sale would enable them to proceed with the publication of the *Great Anatomy*. The Editorship was entrusted to Antommarchi (most unfortunately, as the event proved,) and as relates to the *Prodromus*, he is accused of having, either through ignorance or inattention, so imperfectly explained the views of Mascagni, that a complete failure was the consequence, and the Society found, that instead of being a source of profit, it had nearly exhausted all their funds. Before the appearance of the *Prodromus*, however, and consequently before this result was known, Antommarchi went to the Island of St. Helena, as physician to the Ex-Emperor of France. As he was to pass through Paris and London, advantage was taken of the opportunity, and two uncoloured copies of all the engravings from the plates left finished by Mascagni, were entrusted to his care, to exhibit in those capitals for the purpose of procuring subscribers. In a letter from London, dated June 26th, 1819, Antommarchi mentioned the sensation which the work had produced, and the liberal views of the British Government, evinced by the readiness it exhibited to promote its completion. He also expresses a wish, fortunately not complied with, to obtain the remainder of the proofs of the plates of the skeleton and the drawings not yet engraved. This letter clearly proves a point of importance, viz. that Antommarchi was not in possession of the plates and drawings in question, which are ten, nearly a fourth part of the whole work, and which he has not since had any opportunity of procuring.

The sale of the *Prodromus* having failed, the Society, their funds being nearly exhausted, proposed to Antommarchi, then at St. Helena, to make some alterations in the conditions of their Association. This he declined, and proposed instead to dissolve it, offering at the same time to purchase the engravings and drawings for the *Great Anatomy*; not in money, however, but in copies of the *Prodromus*, which was little better than waste paper. That is to say, the Society was to have a certain number of copies of the *Prodromus*, and to resign the *Great Anatomy* to him : more than this, the Society were to obtain the copies of the *Prodromus*, not at cost price, but at the selling price, with a discount of 25 per cent. This modest proposal, as may well be supposed, was not acceded to, and Antommarchi then (July, 1821,) declined the purchase, or any farther interference

with the Great Anatomy, the value of which he even affected to depreciate.

In November 1821, he came to Florence, and then raised the amount of his offers to 7,500 Tuscan crowns, but still in copies of the *Prodromus*. These offers on the part of Antommarchi prove another point of importance, viz. that he was himself convinced, that he had no individual property in the plates and drawings of the *Prodromus* and Great Anatomy, and that it was only by purchase that he could legally become proprietor of either. Failing in this attempt, he, in January 1822, directed his legal agent to obtain the interposition of the tribunals for the purpose of dissolving the Society. On the prospect of such an event, the heirs of Mascagni immediately offered the Great Anatomy to three friends of the deceased Professor, which they were entitled to do by the nature of their previous agreement with the Society. These friends acceded to the proposal, and the Society having been legally dissolved in April, 1822, the heirs of Mascagni having again become the legal proprietors, not only of the plates and drawings of the Great Anatomy, but also of the *Prodromus*, which was actually published, transferred the former to the Professors Vacca-Berlinghieri, Barzellotti, and Rosini, who published their prospectus in June 1822, in which they allude to Antommarchi with the utmost delicacy.

In speaking of the dissolution of the Society, the heirs of Mascagni put a question to the Count Lasteyrie, which doubtless it is not very easy to answer. "We leave it to your delicacy, M. le Comte," say they, "to explain in what manner the dissolution of a contract, which ensured us 6,500 crowns, can make Dr. Antommarchi proprietor of the Great Anatomy without having paid them."

On this event, the heirs of Mascagni, through the medium of the Austrian Minister to the Court of France, reclaimed from Antommarchi, then in Paris, the three copies of the Great Anatomy (a third copy entrusted to another individual having been delivered to him). The Austrian Minister exhausted every means of remonstrance, entreaty, and persuasion, but in vain. Antommarchi, as a Corsican, declared to him that he was only amenable to the Government of France; and in a letter dated May 14, 1812, stated, that he had no concerns with the heirs of Mascagni; and that he had not any intention of publishing the Great Anatomy. But unfortunately for his character, he had, not being aware of the dissolution of the Society, written on the 7th of the same month to the Director of it, in order to try and obtain from him the drawings not yet engraved, belonging to the Great Anatomy, and threatening, in case of refusal,

to have the parts therein represented, dissected and engraved at Paris. When he became acquainted with the dissolution of the Society, and the transference of the Great Anatomy to the three Professors of Pisa, he directed his agent at Florence to purchase it for ready money; so that, to use the language of the writers of the letter to Count Lasteyrie, "a work which he had before declined purchasing, and which he had attempted to depreciate, saying it was not worth one sol, became all at once of great and real value." The three Professors, however, who considered themselves as being engaged to the public and to the scientific world, declined the sale on any terms.

Antommarchi's intention to publish the Great Anatomy, by lithography, then transpired; the proofs entrusted to him by the Society, and which he still retained, (protesting at the same time that he had nothing to say to the heirs of Mascagni,) serving as copies. All doubts on this subject ceased when the Prospectus appeared of Plates of Anatomy from the Lithographic Establishment of the Count de Lasteyrie, in which Dr. Antommarchi had the unequalled assurance to call himself, who had been merely employed by Mascagni as a dissector for three years, from 1812, to 1815, author of a work which had occupied that great anatomist for nearly thirty years. With equal disregard of truth, he also styles himself Ex-Professor of Anatomy in the University of Pisa, whilst, as appears from the certificate of its Chancellor, he was never there except as a student.

The system of deception has been carried still farther, so much so, as to have been the means of totally misleading MM. Dumeril and Magendie, authors of a report made in May 1823, to the Royal Academy of Sciences in Paris. The *mystification* has been so far successful, that those two gentlemen actually entitle their Report as one made on two Remarkable Anatomical Works, which are being published at the same time; thus leading the world to suppose that the Anatomical Plates of Mascagni and those of Antommarchi are two distinct works, whereas the slightest inspection will shew that one is but a lithographic copy of the other. In the same Number of the *Révue Encyclopédique*, which contains the Report of MM. Magendie and Dumeril, the attempt at delusion is continued, by a statement that the figures in Antommarchi's work are of larger proportions. This assertion is altogether false. The size of the figures in Mascagni's Plates is five feet five inches, Paris measure: Antommarchi's is precisely the same: the paper on which Mascagni's figures are engraved is rather larger than that of the other work.

From this statement the nature of Antommarchi's publication

must be evident; it is in the strictest sense of the word a piracy. From his own statement too, it is clear that it must be imperfect: he is not in possession of ten plates, nearly one-fourth of the whole, viz. six of the skeleton, two of the uterus, foetus, &c.; one of the pancreas, &c., and one of the blood-vessels with other details. Independent of this insurmountable impediment to the success of an act of the most flagrant injustice, those who have seen the original work will not be at any loss to understand that lithography, at whatever degree of perfection it may have arrived, must be wholly incompetent to fill the place of the copper-plate engravings, and to express the differences in the appearances by which the veins, arteries, nerves, and muscles are distinguished.

We have no other excuse to offer for having trespassed so far on the patience of our readers, than the desire to expose a most daring attempt at imposition, and to prevent the disappointment which might at some future period be felt by those who should become possessed of a work which can never attain any reputation, and must, from its very nature, be imperfect and mutilated.

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ART. IV. *The Lectures of Sir Astley Cooper, Bart. F.R.S. Surgeon to the King, &c. &c. on the Principles and Practices of Surgery, with additional Notes and Cases.* By FREDERICK TYRRELL, Esq. Surgeon to St. Thomas's Hospital, and to the London Ophthalmic Infirmary. Vol. 1, pp. 352. London, 1824.

It is perhaps not unfair to suppose that we owe the appearance of this volume to the unauthorized publication of Sir A. Cooper's Lectures in the *Lancet*, which, it must be unnecessary to inform our readers, is a weekly Journal, professing to give reports of lectures delivered in London, and of cases in some of the principal hospitals.

This publication, as might have been anticipated, has given rise to much animadversion, and to a good deal of angry discussion; but as we are not now called upon, nor disposed, to discuss the controverted points which have thence arisen, we shall proceed to Mr. Tyrrell's production. The author has guarded against the possibility of the imputation of breach of confidence, by prefixing a letter, from the distinguished lecturer, which proves him at least not unwilling that his Lectures should be given to the profession at large, and at the same time bears testimony to the correctness of the copy submitted to his inspection.



48 Sir A. Cooper on the *Principles and Practice of Surgery*.

tion. It also strongly proves the correctness of the reports in the *Lancet*, for though Mr. Tyrrell's book contains more, yet there are whole paragraphs with scarcely a word of difference in the two copies.

Mr. Tyrrell has, we think, acted injudiciously, though by no means inexcusably, when we look upon him as the friend and pupil, and not as the Editor, in the exaggerated degree of importance he has attached to the work he has undertaken. We do not wish to disparage the abilities or the exertions of his justly celebrated teacher, but we can by no means coincide in the opinion he has expressed, that—"The principles contained in the following Lectures have almost entirely originated from Sir Astley Cooper, and have been taught by him for more than thirty years."—Preface.

He has also exposed himself to the reproach of want of judgment in the succeeding paragraph, which, even if admitted to its full extent, proves nothing as to the originality he commences by claiming.

"Their excellence and accuracy have been proved, not only by the extensive and successful practice of Sir Astley himself, but by the experience of several thousands of medical men who have received them from him, and by whom they have been propagated through all parts of the world in which surgery is practised as a science."

In answer to such sweeping assertions it is enough to say, that in the present epoch, so favourable as it is to the general diffusion of knowledge—the principles of science, and of none more so than medicine, must be every where the same, and that the only differences which exist, consist in points of minor importance, and in the variations which must always be the result of external circumstances, and of the greater or less share of skill and dexterity which may fall to the lot of individuals.

Having thus denied the novelty, or rather the peculiarity of the principles of surgery, which Mr. Tyrrell has published, as those taught by Sir A. Cooper, it will not be expected that we should occupy the time and attention of our readers by entering on the discussion of the points which form the ground-work of professional knowledge. However important they may be, we are bound to suppose that such a proceeding would be unnecessary, and we are most certain that it would be misplaced. We shall content ourselves with extracting a few passages to serve as specimens, however inadequate, of the manner, and where there is any peculiarity of the matter, contained in the Lectures.

Of the latter description we conceive are the following directions

respecting the prevention of scars in the treatment of chronic ulceration :—

“ The prevention of scars is a great object, particularly in exposed parts of the body ; this may appear of little consequence, but it certainly is not so ; scars from abscesses in the necks of females, excite in the minds of most of our sex a reluctance to associate with them ; and thus many a fine young woman may, by such scars, be doomed to perpetual celibacy. No part of the practice of surgery has been more faulty than the manner in which abscesses of the neck have been treated. I have seen on one side of the neck large scars from abscesses that had been badly managed ; whilst, on the other side, where the treatment had been more skilful, scarcely any vestige of a wound was to be seen. I have from very early practice, and subsequent experience has proved to me its use, been exceedingly careful in the management of these cases. Aperients, with calomel and rhubarb, should be given ; evaporating lotions should be used ; you must be strict as to regimen and diet ; the food must be nutritive, but not stimulating. The best mode to adopt in these cases, is to open the abscess before the skin be much affected, and as soon as a blush has appeared ; thus scars will in general be prevented. It is desirable, in opening the tumour, to use a very fine knife, for two reasons : 1st, A small opening is made ; 2d, It does not alarm the person. The knife I always use has the blade an eighth of an inch wide, and it appears to the patient as a needle. When you press the sides of the wound, take care to squeeze out all the solid flakes of matter to be met with in scrofulous tumours. If this be not attended to, they will at last slough ; but if, on the contrary, you carefully avoid leaving any of that unorganized substance, adhesion will take place, and the wound will heal. Almost every thing in these cases depends on getting rid of the solid matter. Bread poultices, made with a sulphate of zinc lotion and spirits, may be afterwards used.”

“ There is a point of great importance to be attended to, that is, the direction in which you make the opening : always make it transversely, and not in the axis of the neck ; for when the wound heals, it will scarcely be seen among the creases or folds of the skin. One more observation on this subject : let me entreat you not to open these tumours when they have a purple blush upon them, like the hue of a grape ; the skin is thin, and will slough, and if you then open the tumour, you will bring discredit on yourself.”—Lecture 6. p. 153, &c.

*Treatment of Varicose Ulcers.*—“ The first thing to be attended to in these cases is the recumbent posture ; in fact, this position is indispensable ; you can do nothing without it ; lint, wetted by the black mercurial wash should be laid on the ulcers, oil silk over that, and the limb should be well and regularly bandaged, beginning at the foot.”

“ Another great benefit is derived in these cases from opening the veins ; indeed they are so distended, that they may more properly

be termed lakes than rivulets. If you do not open the vessels, you will find considerable difficulty in the progress of the cure. The best plan you can adopt is to puncture them by means of a lancet, twice in the week as long as you think they require it; let the bandage be afterwards applied, and the parts kept wet by means of evaporating lotion. No danger whatever attacks the opening of these veins, and very great relief will be afforded by it. If the punctures, however, at any time should not unite, but fret into ulcers, you must apply to them liq. calcis and calomel."

"It often happens that persons who, for a length of time, have had the veins of their lower extremities in a varicose state, will find a great quantity of blood in their shoe; the crust before alluded to coming off, is the cause of hæmorrhage, by opening the vein. Upon being called to a patient so situated, you may put him in the recumbent posture, apply a bandage, wet the part constantly with spirit of wine and cold water, and you will prevent any future bleeding."—Lecture 8. p. 203, &c.

A very strong protest is also given against the practice of dividing varicose veins under any circumstances, as being at once fruitless and attended with extreme danger. We believe that the general opinion of the profession is very much to the same purport, more especially since the appearance of Mr. Travers's excellent paper on the diseases of the veins.

We have been particularly pleased with the three lectures contained in this volume on the various injuries of the head; they contain an excellent summary of the most approved doctrines, resting on the firm basis of cases and dissections.

Although, as we have already stated, we are of opinion that Mr. Tyrrell has formed an erroneous estimate of the originality of the doctrines presented in these lectures, we have no doubt that the members of the profession in general, and more particularly those who have had the gratification of receiving their scientific education under the distinguished baronet, will do justice to the intention by which he has been actuated. It is to be regretted therefore, on this and every account, that the high price at which the book is published must necessarily prove a serious obstacle to its general circulation. The present volume contains only twelve lectures out of a course consisting of between seventy and eighty, and yet by means of large type and wide margins, it has been extended to 352 pages, and costs half a guinea. If the same plan and proportion be retained in the succeeding parts of the course, the work will obviously be placed quite out of the reach of many to whom it would be a most desirable acquisition.

Mr. Tyrrell's Notes and Cases require no comment; of most of them, the less that is said the better.

ART. V. *A Practical Treatise on Hæmorrhoids, or Piles, Strictures, and other important Diseases of the Rectum and Anus: being, with some additions, a Treatise, to which the Jacksonian Prize was adjudged by the Royal College of Surgeons.* By GEORGE CALVERT, Member of the Royal College of Surgeons, &c. pp. 373. London, 1824.

The subject of this work is a very important one, and would require a man of great abilities and extensive practice to do it justice. We are not sure that our author, though evidently a man of talents and application, is quite such a person. He has indeed travelled in France, Italy, Poland, Greece, and Turkey, and he appears to have practised the art of surgery upon the hæmorrhoidal Turks; though with all these advantages, the greater part of his materials seem to have been extracted from the writings of other men. But of his ability and practice, the reader will himself judge, when he has perused our review of the volume.

The work is divided into seven chapters; in which the following subjects are treated of successively: Hæmorrhoids, Strictures of the Rectum, Morbid Contraction of the Anus, Prolapsus Ani, Fistula in Ano, Ulcers of the Rectum, Excrescences, &c., about the Anus and within the Rectum. In our examination of them we shall follow the author's method, though in doing so, we may be led unavoidably into some degree of repetition.

*Hæmorrhoids or Piles.*—This disorder has attracted by far the greatest share of the author's attention, and though the subject is a common one, and familiar to most surgeons, several of his remarks are valuable and important. The term hæmorrhoid, implying a flow of blood, is not strictly applicable to the disease at all times, as piles not unfrequently exist without it; but the term being as old as Hippocrates, and its meaning sufficiently understood, there can be no harm in retaining it. Mr. Calvert then describes "hæmorrhoids to be a morbid state of the vessels of the rectum and anus, with pain, tension, &c., accompanied or followed by the formation of tumours in those parts, and a flow of blood frequently periodical."—p. 7.

Our author next gives a very accurate description of the march of the disease, and of the disagreeable symptoms which it sometimes produces in weak and irritable constitutions; symptoms which are often present, when there are neither tumours nor discharge of blood.

"In all cases, however," he informs us, "those symptoms which

indicate an increased action and congestion in the vessels of the part are present, in some degree at least ; and this state of the vessels should therefore be regarded as the most prominent feature of the disease. Hence it would appear, even from a cursory view, that the immediate cause of hæmorrhoids consists in a preternatural determination of blood to the vessels of the rectum ; and the examination of the tumours, as well as other circumstances, show, that the arterial capillary system of the part is chiefly implicated."

Hippocrates and other ancient authors, believed that the hæmorrhoidal discharge proceeded from the tumid extremities of veins ; and the opinion seemed to be favoured by the dissections of Morgagni.

" Later investigations, however," says Mr. Calvert " have shown; that the hæmorrhoidal discharge does not proceed either from the tumid extremities of the veins, or from the parietes of these vessels in their natural state, or when ruptured ; but it is given out by the exhalents."

This is proved by increased action in the capillary system of the part, by the constitutional affection, by the discharge of florid blood, by the abatement of pain, heat, &c., in consequence of the discharge, and by the latter being preceded or followed by an exhalation of serum. If the blood is at any time dark, it proceeds from the accidental rupture of veins. But the quantity discharged is sometimes so enormous, that we cannot suppose it to come entirely from the vessels of the rectum ; and in such instances, probably, it is never pure blood.

In some persons this discharge returns at stated periods, with astonishing regularity ; and in a few females it has been vicarious to the menses. And it would appear that it is in such cases only, where its artificial removal may be attended with bad consequences. We cannot say that we much admire Mr. Calvert's pathological reasoning on this subject ; but we agree with him in thinking, that an hæmorrhoidal discharge which has been of long standing, and which seems to be beneficial to the patient, should not be stopped or removed rashly.

We shall here extract our author's description of those hæmorrhoidal tumours, which are commonly termed piles, as it is in some respects new, at least in this country, and seems to give a true idea of their nature.

" They are first seen in the form of small fleshy tubercles, generally of a brownish or pale red colour, and situate within the anus, or descending from the rectum. On examining them with the finger, they are found to have a somewhat solid and spongy feel, and, when cut into, present a surface more or less compact, and bloody, from which blood oozes, leaving the texture pale, and more relaxed.

" When these tumours are more external they are paler, and generally also, more elastic and transparent ; appearances which arise from the nature of the skin that covers them, and the serum with which their internal tissue is often infiltrated. These are sooner produced, and disappear more rapidly than the former.

" These tumours very often contain a central cavity, filled with fluid, or coagulated blood, which is of a brighter or darker red, according to the length of time it has been effused. The lining of the cyst is either smooth or granulated ; and by the assistance of the microscope in the dead subject, after having forced into the arteries by which they are supplied with blood some fine and coloured injection, a few minute vessels may be traced, through which the fluid gradually exudes into the above-mentioned cavity, but there is evidently no connection whatever with any of the larger vessels.

" This cavity is usually small, not exceeding the size of a pea, but it is sometimes large enough to contain several drachms of blood.

" More generally, however, there is no regular cyst, but the substance of the tumour is infiltrated with blood, which eventually becomes dark and coagulated. This blood does not appear to be the result of common extravasation, since it is not generally diffused, as in ecchymosis, but confined in separate patches of different shades, presenting a variegated aspect when the tumour is cut into ; on closer examination it appears as if it were contained in dilated vessels, which traverse the tissue in the direction of the long axis of the rectum, so that if the tumid parts be divided longitudinally, they present numerous dark streaks through the substance, but, if the section be made transversely, small, roundish specks only appear."

They disappear and return at uncertain periods, and become larger and firmer, in proportion to the frequency of the attack. Often, however, after some discharge of blood, or a revulsion of their contents, the tumours collapse, and leave merely pendulous flaps, formed of the stretched skin, and of greater or less magnitude. Sometimes they disappear entirely.

" When, however," says Mr. Calvert, " they have been strangulated for some time by the pressure of the sphincters ; when they have been repeatedly gorged with fluids, or their usual mode of dispersion is prevented by other causes, either local or constitutional, these tumours, acquiring more solidity, become permanent, varying but little in size at different times, and forming a source of almost constant pain and inconvenience, in being protruded, inflamed, ulcerated, or, what is very common, by inducing a troublesome and distressing prolapsus of the anus.

" This permanent state of the tumours is owing partly to the development of the capillary vessels, gradually obliterating the interstices ; and, in part, to the effused blood coagulating, and becoming organized ; and hence the production of the condylomatous

tumours, and the foundation of that irregular mass, which is found around the anus in those who have been long subject to hæmorrhoids, commonly termed the hæmorrhoidal excrescence, all of which are permanently solid, and can only be removed by the knife or the ligature."

"They sometimes acquire an enormous size.

The generality of practitioners, in this country, have considered these swellings as dilated veins; not even excepting Mr. C. Bell, Sir E. Home, and Dr. Baillie. Dr. Cullen, however, and Mr. Abernethy, have favoured the opinion of our author, an opinion which has been very generally adopted on the Continent since the time of Le Dran. Of late, Chaussier and La Roque have investigated their precise nature with much care, and have shewn that, even where varicose veins are implicated in the structure of the tumours, the cellular parenchyma is never wanting. Mr. Calvert has also repeatedly detected the cellular structure by injection in the dead subject. But the general appearance of the parts after death is in favour of their being dilated veins.

"In the dead subject these tumours, which, during the hæmorrhoidal paroxysm, were fully distended, are found more or less collapsed, and the veins which, prior to death, constituted but a small part of the swelling, and ramified chiefly between the body and envelopment, now occupy the centre, and are, both from their colour and size, the first objects that arrest the attention, when the latter part is removed for the purpose of investigating their nature. Hence it is, that, even in cases where the above-mentioned swellings were formed during life by a congestion in the capillary vessels, the veins on dissection are often found enlarged, forming, together with the fine skin of the anus, or the villous coat of the rectum, the chief parts of the tumour."

The structure, however, which during life had become solid, usually remains so after death.

*Hæmorrhoidal Varices.*—These should be accurately distinguished from piles, and fortunately it is not difficult to do so. They generally come on slowly.

"With respect," says he, "to their physical properties, it may be said, that they are generally of a dark or bluish colour, soft and elastic to the touch, resembling in this respect the ripe grape; and when compressed by the finger they become sensibly less, but return to their former state as soon as the pressure is removed.

"The form is also very different from that of the true hæmorrhoidal tumour; being broader at the base, rounder, and sometimes distributed in irregular and ill-defined clusters, like similar affections of the *venæ saphenæ*; they show no disposition whatever to

bleed, unless ruptured or cut into, and when once formed they increase gradually, or remain nearly stationary through life.

"No judgment can be formed by the position, since these, as well as the common hæmorrhoidal tumours, are usually found at the very extremity of the rectum; but it may be presumed, that the tumours are of this nature when several being crowded together in this part yield readily to the finger, and may be traced to some extent up the rectum; for the true hæmorrhoidal tumour is generally external, and almost invariably, quite within the reach of the finger."

They sometimes extend as high up as the colon; and they have been found in the rectum and colon, when the liver and spleen were in an indurated state. The incision or rupture of these varices has sometimes proved fatal from loss of blood; hence the necessity of caution in distinguishing them. Mistakes, however, can proceed only from gross ignorance, or, what is worse, negligence. The case is different where varices and piles exist together; but this rarely happens, and when it does, it is not very difficult of detection.

Mr. Calvert's description of piles in their inflamed state is accurate, but contains little that can interest the reader. He has enlarged considerably on the causes of the disease. A torpid state of the bowels, brought on in early youth by sedentary habits, and inattention to the calls of nature, and perhaps assisted by an hereditary disposition, has, we are convinced, been a great means in many instances, of inducing it. Our author speaks also of violent passions of the mind, the irritation of worms, drastic purgatives, excessive venery, and whatever produces obstruction in the viscera of the abdomen. In those who have been subject to the disease, we believe, that the use of strong drink is improper; particularly occasional excesses; but seldom are those capable of inducing it, unless in conjunction with long continued cold, wet, and fatigue. We think Mr. Calvert carries his animosity to aloes, as an inducer of piles, to a ridiculous length; for probably, any other purgative, if taken in an overdose, will produce effects equally unpleasant. It is the dose and frequency of the dose, not the purgative that does harm. In this respect our experience does not agree with his.—After an apology for not considering the causes of hæmorrhoids more fully, Mr. Calvert concludes with the following remark:—

"Many of those causes, which, in excess, produce or dispose to hæmorrhoidal diseases, may, if applied with moderation and judgment, contribute very materially to their prevention and cure."

*Treatment.*—In commencing his rules for the treatment of



piles, our author again enters on the question, whether the hæmorrhoidal discharge should be suppressed or not; and finally, in opposition to Stahl, and the Continental physicians, determines that it should. But, nevertheless, he is of opinion, that the disease is oftener constitutional than purely local; and that an attempt to cure it suddenly by local means is frequently productive of danger.

"A gentleman," he says, "in whom the discharge and swelling of the tumours were in some degree periodical, being under the necessity of going to some distance from town, endeavoured to check the attack at its commencement by applying cloths, dipped in cold water, to the anus. The local excitement was, in consequence, subdued, but was succeeded by violent pains in the stomach, vomiting, and general fever."

Gout, apoplexy, and cutaneous eruptions have also in this way been induced. Great caution, therefore, must be employed in all cases of long standing; general and topical remedies must be directed against the exciting causes.

"And we should never," he adds, "interfere when the hæmorrhoidal attack has succeeded to diseased action in some more important part of the body; since it is sufficiently obvious, that the one may supersede the necessity of the other, and, in acute diseases particularly, may be considered critical. Indeed the exemption of those subject to hæmorrhoids from a variety of diseases, a fact noticed by Hippocrates\*, and by almost all writers on the practice of physic, depends upon the same principle of the economy, and may be regarded amongst those numberless cases in which nature displays the extent and mode of her operations, furnishing also by this medium the surest rules for the application of remedies."

To ward off the attacks of a disease which is so liable to return, those who are disposed to it should observe a very strict regimen; and we know that by this means it may be kept off for an indefinite period. The best diet is that which consists of a mixture of animal and vegetable food, and which is moderate in quantity and not too stimulating. Milk, when taken warm from the cow, has in some instances been of great use, and has even acted as a gentle aperient. Gentle laxatives are frequently required, and perhaps even are better than a mixture of sulphur and supertartrate of potash. Here our author reprobates the use of hot liquids taken often into the stomach; and he highly disapproves of hot injections; a practice, however, which is not much followed in Britain. But where there is much discharge of blood or serum from the rectum, injections of cold

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\* Lib de Hemor.

water, or such as are pretty astringent, may be often of great service.

The sudden stoppage of the discharge, in this country at least, is often not dangerous.

"In cases, however, in which the suppression of the attack is followed by violent pains in the abdomen, by hæmorrhage from the lungs or stomach, or, in fact, by any affection that appears to be associated with it, it is generally advisable, not only to employ such means as the urgency of the case may require, but, if possible, to produce a revulsion to the vessels of the rectum. Warm stimulating fluids should be injected into the rectum, and the patient should sit over the steam of hot water. If these means fail, leeches should then be applied round the anus, or recourse may be had to electricity for the same purpose. The latter method is strongly recommended by Desault, who states that he has derived great advantage from it, both for himself and others \*."

The first thing to be considered in the local treatment of the disease, is the nature of the swelling; for, till we have ascertained this, we cannot with safety apply remedies to the part, or make pressure, or operate with the knife or ligature. Mr. Calvert appears to be a great advocate for cold local remedies in combination with pressure; and in this we agree with him, if the first burst of inflammatory action is over. Before that, the patient seldom relishes them. Of pressure alone, we have a high opinion, when applied to the tumours in their quiescent state; it will in a short time nearly obliterate the external, and the internal, it will confine to a safe receptacle.

When the inflammation is very great, leeches have often been applied, and frequently with advantage. They may be put upon the tumours themselves, if these are quite external and not large, but, applied to the internal *prolapsed* hæmorrhoid, we have known them produce very bad effects; and in this way they ought *never* to be employed. Mr. Calvert has discussed this point very carefully, and upon the whole he seems to be of our opinion. The disease, we think, is naturally disposed to terminate in resolution; and it very rarely suppurates. When the tumours mortify, they have been improperly interfered with, or have been cut off from the circulation by the sphincters.

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\* Mais une remède qu'on ne doit pas négliger pour rappeler cette évacuation nécessaire, c'est l'électricité. Ce moyen curatif, administré au bains est un des plus efficaces pour rappeler toutes les évacuations supprimées. On peut y joindre quelquefois l'électricité par étincelles; mais j'ai tré sur beaucoup des malades, et sur moi meme, un grand avantage de l'électricité par bains pour les hæmorrhoides. On en trouve un exemple dans les ouvrages de Sigaud Delafond sur l'électricité médicale, et surtout lorsque le flux hæmorrhoidal masque un flux hépatique.—*Cours Théorique et Pratique de Clinique Externe par Ph. J. Desault.*

"It sometimes happens, that, in consequence of inflammation, several hæmorrhoidal tumours within the anus or rectum become united at their sides, so that a portion of the cavity of the rectum is nearly obliterated, to the extent of two or three inches. I had some time ago an opportunity of seeing a case of this kind in one of the Italian hospitals. It was cured by the frequent use of warm emollient clysters, injected with care, and by pressure from a short rectum bougie. The whole of the bougie was introduced twice a-day, and, after remaining some time, withdrawn by the tape attached to one extremity."

To such cases, M. Dupuytren, of the Hotel Dieu, at Paris, is in the habit of applying the actual cautery, nearly in the same manner in which it was introduced into the bowels of the unfortunate Edward the Second.

Various means have been employed to prevent the descent of internal hæmorrhoids; but they have been rarely found of much service. The following simple contrivance we have used for some years. Two separate straps made of bootmakers' broad tape, and about a yard in length, less or more, are hung on buttons fixed on the inside of the waistband, *nearly* opposite to those on the outside, to which the straps crossing the shoulders and supporting the breeches or trowsers, are usually fastened. The anus-straps can be thus drawn to any degree of tightness by tightening the buckles of the shoulder-straps. There is no need to interpose any thing, betwixt the straps and the anus, but a pair of soft cotton or linen drawers; and in this way, as a strap passes on each side of the scrotum, a good truss is formed for the testicles. A person may thus walk many miles with ease, who previously could not walk half a mile without a painful prolapsus, provided his bowels are not too open. On this account, hæmorrhoidal patients should accustom themselves to have a stool at bedtime, and they should at all times carefully replace the swellings with the hand.

When it is thought advisable to remove the swelling entirely, Mr. Calvert prefers the knife to the ligature, unless the seat of the disease be a great way within the rectum. In the real hæmorrhoid, the hæmorrhage is seldom troublesome, but the ligature is said to have frequently produced fatal consequences. Authors, however, differ much on this subject. For ourselves, we think that the ligature should never be applied to hæmorrhoids, when they are in a state of high inflammation. The modes of operating, whether with the knife or ligature, are too well known to need discussion in this place.

*Stricture of the Rectum.*—This affection, our author remarks, was, comparatively speaking, little known, till within the last

twenty or thirty years. Such affections, if neglected, must be considered as the most fatal and distressing to which man is liable; and they were at one time too much neglected, from the erroneous idea that they were of a cancerous nature. They attack patients at all ages, but in infancy they are less common. Symptoms are not unfrequently produced by them, which appear to have their seat in some other part of the alimentary canal, or in some adjacent organ; and in all ambiguous cases the practitioner should make a careful examination of the rectum.

"There can be no doubt," Mr. Calvert has observed, "that, in many cases of iliac passion, and obstinate constipation, arising from this source, death takes place without the slightest suspicion of the cause.

In other cases, especially when the disease is of a malignant nature, it is not unfrequently confounded with schirrus of the uterus. I have known one instance in which a patient of one of our hospitals, and who had a carcinomatous stricture in the rectum, remained more than six months under the care of an eminent surgeon, without the true nature of his complaint being discovered."

After these general remarks on stricture, our author proceeds to the consideration of their form, &c.

"Strictures of the rectum" he observes, "differ very materially, according to their nature, and the period at which they are examined. Sometimes the inner membrane projects into the gut, forming a kind of perforated septum; the surface is smooth, without induration, and if the point of the finger be introduced through the aperture, it is found to yield very considerably to the pressure; from which we are led to conclude, that it is owing solely to a spasmodic affection of the transverse muscular fibres of the part. Although this form of stricture is not uncommon, yet it has never, I believe, been found on dissection."

Before death can take place from obstruction, a degree of thickening has been produced, which materially changes the appearance of the stricture.

"In some cases the contraction is chiefly owing to a thickened and indurated state of the mucous membrane, arising from inflammation, or some chronic alteration of texture. When inflammation does not proceed to any great extent, coagulable lymph is deposited between the coats of the rectum, or upon its internal surface: this becoming organized, produces a permanent thickening, with a proportionate diminution of the cavity of the gut, and a gradual contraction of the muscular tunic. Indeed, whenever the mucous membrane of the intestines is constantly irritated at any particular part, which, in the present instance, must necessarily be the case, from the mechanical effects of the fæces upon the part which pro-

jects within; or when it puts on any chronic action; there is always more or less disposition in the muscular coat to contract gradually upon it. Hence, whenever strictures of the rectum have existed for any considerable time, the mucous, cellular, and muscular coats become more or less affected, so that, on dissection, it is often impossible to determine in which the disease originally commenced."

Our author has quoted Mr. C. Bell's description of the manner in which this kind of stricture is produced, and then adds:—

"If the gut be examined after an attack of inflammation, and before the parts have recovered from its more immediate effects, the manner in which this form of contraction is produced will be more easily conceived. The internal membrane is found protruded into the cavity of the gut, in the form of irregular folds, which, if the inflammation be not wholly subsided, have a soft and pulpy feel, as if distended by a fluid. These folds are sometimes incrustated with coagulable lymph, and occasionally, they are partially connected together by organized shreds of the same substance. In some cases, however, the form of the internal membrane is not materially changed by the effect of inflammation, but it is more or less covered with a false membrane, or is ulcerated in different parts. In the former case, the inner surface of the gut has a roughish, uneven, or granulated feel, very unlike that velvety smoothness which it possesses in its natural state."

This form of stricture is almost wholly confined to the lower part of the bowels, immediately above the internal sphincter muscle.

The cavity of the rectum is sometimes almost obliterated by the formation of hard painful tubercles. Mr. Calvert has seen three cases of this kind, but could trace them to no particular cause. They yielded readily to pressure. Morgagni, Desault, and White, have also met with stricture from tubercles. Some have supposed them to be of the venereal kind, but in our author's opinion, this is mere conjecture.

"Carcinoma is another, and not very uncommon cause of obstruction in the rectum. In this case the disease does not admit of a cure; it is necessarily progressive, and consequently fatal. Very generally it commences at one side of the gut, just above the upper part of the internal sphincter, and if an examination be made at this stage of the disease, a smooth but hard and knotty projection is discovered. By degrees, the disease, which, at first, was probably confined to the glandular structure of the internal membrane, extends around the gut, changing the structure of the subjacent parts, and the obstruction is still further increased by the gradual and permanent contraction of the transverse muscular fibres.

"Carcinomatous stricture, however, is not confined to the lower part of the rectum; it is often found higher up, more especially at the sigmoid flexure of the colon. The appearance, also, of the disease, at its commencement, is often exactly similar to that of the common indurated stricture, from which, however, it may sometimes be distinguished by circumstances that will afterwards be noticed. It is not improbable, indeed, that cancerous ulceration may, on some occasions, supervene to that indurated state of the parts which is often attendant upon common stricture; but that the nature of this induration differs materially, although apparently similar, as far as a judgment can be formed by partial examination, is shown, by the pressure of the bougie being generally useful in the one case, and inadmissible in the other; and this difference might probably be discovered in the intimate structure, if, under such circumstances, a minute examination could be effected."

The ravages which it makes before death are often frightful; and of these Mr. Calvert has given a description from the *Edinburgh Medical Journal*.

"In all cases," he observes, "of carcinomatous stricture, there is always, when the disease has existed for some length of time, more or less induration and confusion of structure, particularly observable in what was originally the muscular tunic; and in cases of this nature, where I have had an opportunity of examining the intimate structure attentively, there was evidently more of the gristly, and less of the fibrous or cellular bands, than is usually found in carcinoma affecting other parts of the body. Sometimes, as in the preceding instance, it extends over a great part of the gut, but more frequently it is confined to a small part only. In the former case the diseased action is often carried in every direction along the adjacent cellular tissue, which in this, as well as in all other cases of disease, attended with change of structure, forms the readiest medium of contamination; and hence, the surface of the os sacrum, or even that of the lumbar vertebræ, may become involved in the extent of the disease: indeed, the posterior part of the rectum is sometimes so firmly connected with the sacrum, that it cannot be separated without difficulty, even with the aid of the knife."

As we have already observed, the rectum may be considerably contracted by the ulceration and subsequent adhesion of hæmorrhoidal tumours. This, however, is not very dissimilar to the tubercular stricture already mentioned. Our author will not allow that the venereal disease ever occasions stricture of the rectum.

In its early stage, this disease is not very readily discovered; and even the patient himself is often incredulous as to its being the cause of his sufferings. This being the case, we make no apology for extracting Mr. Calvert's luminous exposi-

tion of the symptoms which usually precede and accompany stricture.

"The patient," he says, "is first affected with a torpid state of the bowels, to which he has, perhaps, never before been accustomed, and for which he is unable to assign any satisfactory reason; but this is not attended with much inconvenience; his strength and appetite often continue good, and a considerable time frequently elapses before he is induced to make any more particular inquiries into the nature of his complaint. In some cases there is a degree of morbid sensibility or uneasiness, almost amounting to pain, about the loins or os sacrum, with an abundant discharge of mucus from the anus, by which the attention of the patient is perhaps directed more to the source of his complaint, and at an earlier period than he otherwise would have done; but on other occasions there is either no peculiar sensation about the rectum, or, if present, it is so slight that it altogether escapes his notice, and no discharge of mucus is observed, unless with the *fæces*.

"To obviate the confined state of the bowels recourse is generally had to purgative medicines, the necessity for which is increased in proportion to the frequency with which they are employed, and the progress of the contraction; but so long as by these means evacuations are procured with some degree of regularity, or the contents of the bowels can be forced below the stricture without much straining, no material derangement of the digestive organs may be produced, and recourse to medical opinion is still put off to a later period. In proportion, however, as the disease advances, the *fæces* are accumulated in greater quantity, and the patient begins to suffer from slight cholic pains, oppression at the stomach, flatulency, eructations, swellings of the abdomen, with a feeling of distention and tightness in the direction of the colon; his motions are very scanty, and produced with considerable straining. These symptoms are occasionally removed or moderated for a short time by a diarrhoea, the usual means by which, in cases of this nature, as well as in those of obstinate costiveness, arising from other causes, the alimentary canal is relieved of its superabundant contents. The patient now begins to feel still greater difficulty at stool, where he is often compelled to remain for a considerable time, or return very frequently, so that a great part of the day (usually the morning) is spent in ineffectual efforts to produce a sufficient evacuation from the bowels, a sensation still continuing, as if something still remained to be discharged. He is now sensible that some unusual cause of obstruction exists, and on examining the state of the evacuations, he finds that they are not only very scanty, but that, instead of being round, as during health, they have either a triangular form, or they are flattened like tape. By degrees the occasional attacks of cholic become more frequent and violent, the tumefaction of the abdomen increases, and there is sometimes considerable tenderness upon pressure, with general symptoms of fever, indicating a degree of inflammation. Sympathetic pains are also

felt more or less in the head, groins, and lower extremities; and there is not unfrequently difficult micturition, with retention, or even suppression of urine. In some cases there is a sensible intermission of the pulse, with palpitations of the heart, and a disposition to syncope; symptoms which, in some instances, may be attributed to the pressure of the distended colon upon the inferior vena cava, or the abdominal aorta.

"Purgatives, which had previously been of so much service in relieving the distention, &c., sometimes produce very alarming symptoms at a more advanced stage of the disease, unless administered with caution; and, if ulceration has taken place, the passage of the liquid fæces through the strictured part is attended with very great suffering, particularly if it be of a cancerous nature. Still, however, as in the former case, they are employed by the patient; but the fæces not being wholly discharged, a gradual, but immense accumulation eventually takes place, and either inflammation, attended with continued vomiting, and an everted motion of the alimentary canal supervenes, and closes the scene, or the patient dies more gradually, oppressed in mind, and worn out by continued suffering."

The really diagnostic symptoms appear to be an unusual distention of the colon, from which, on pressure, rises a rumbling sound, occasioned by the agitation of the inclosed wind and scybalæ; pain felt about the junction of the last vertebræ with the os sacrum, extending downwards, sometimes as far as the feet, and chiefly in the direction of the large nervous trunk; tenesmus, amounting to little more than a teasing desire, without the power to discharge the matter accumulated above the stricture; and scanty motions of an irregular or figured form.

The above symptoms are more or less applicable to every kind of stricture; but when the disease is cancerous, a few others are superadded. Unfortunately, however, these are not noticed until the diseased action has made some progress; and they consist principally of those sensations and discharges which characterize cancer in other places.

Stricture can often be attributed to no obvious cause; but inflammation, in some form or other, may be generally considered as its main exciting cause. Severe colics, and other spasmodic affections of the bowels, seem also to have sometimes preceded it. A partial obliteration of the canal may also exist as a congenital affection. After the exciting causes have been some time in action, contraction and disorganization ensue; and the manner in which these are completed Mr. Calvert has thus explained:—

"Whenever the muscular fibre, in any part of the body, is exercised beyond a certain point, the consequence is, that it will after-



wards remain for a time sensibly shorter; this is seen in the long muscles, when, after lifting up, or carrying a heavy weight, the fore-arm cannot, on the following day, be fully extended, from the shortening of the fibres of the biceps muscle; the same effect also takes place with respect to the hollow muscles, and a reduction of their calibre is the necessary consequence.

"This state of the muscular fibre is in general only of temporary continuance, because, in respect to the voluntary muscles, violent exertion has its bounds, and the pain, &c., consequent on any injury they may have sustained, precludes unnecessary motion; but this is not the case with regard to the alimentary canal, particularly about the termination of the colon and upper part of the rectum. Here the parts are not only almost in constant motion, but any partial reduction in the calibre of the gut produces the necessity for still greater action. The alvine discharges must pass, whatever may be the state of the mucous tunic, and it is obvious, that if these are acrimonious, or much indurated, the consequent violence and injury must be chiefly felt by that part which is already narrower than the rest; hence it is, perhaps, that stricture is most common at the sigmoid flexure of the colon, where the gut, in its natural state, becomes sensibly less."

*Examination and Treatment.*—Whenever symptoms lead to a suspicion of a stricture existing in the rectum, it is absolutely necessary that an examination should be made.

"For this purpose," says our author, "the rectum being cleared out by a common clyster, and the patient placed upon his side, or, what is better, resting upon his knees and elbows, the finger of the surgeon should be smeared with common cerate, and carefully introduced within the gut. If no contraction be discovered, it may be presumed that one exists higher up, and a common plaster bougie, rendered somewhat pliant by warmth, and slightly bent near the end, so as to accord in some degree with the natural curvature of the passage, must be anointed in a similar manner, and gradually passed onwards, if no obstacle intervene, within the sigmoid flexure of the colon. This operation requires some caution and judgment on the part of the surgeon, for if it is not performed with delicacy, the parietes of the gut may possibly be injured, or the upper axis of the pelvis being overlooked, the point of the bougie may be directed against the projecting part of the sacrum, and give rise to the idea of a stricture, when none in reality exists. At the same time, also, it is useful to bear in mind, that a similar mistake may possibly occur when the upper part of the gut, being distended with fæces, is forced down, and in some degree turned upon itself; or the cavity may be almost obliterated by the pressure of tumours, as in cases of enlarged ovaria, retroversion of the uterus, &c."

The bougie has been employed where a gallstone had imbed-

ded itself in the parietes of the rectum, and where there was merely an unusual projection of the sacrum.

"In examining the gut, it is better, in the first instance, to make use of a full-sized bougie, on the same principle as it is employed in ascertaining the situation of stricture in the urethra. If this meet with opposition, it should be withdrawn, and one of a somewhat softer texture, and adapted to the diameter of the gut at the strictured part, or a tent, formed of linen, and some stiff cerate, should be substituted. The latter plan is, in general, only applicable to those irregular projections of the internal membrane, which are the immediate consequence of inflammation, and are almost invariably found at the lower part of the gut; the former may be employed in almost any case, but it is indispensable whenever the stricture is of some extent, of a firm nature, and situate near to the sigmoid flexure of the colon."

The examination may be also made with an ivory ball affixed to the end of a silver wire. Sometimes a speculum ani may be employed, but, if introduced farther than necessary, it will be productive of bad consequences.

"With regard to the bougie, various kinds are made use of, for the purpose of dilatation: that which is sufficiently stiff to pass the stricture without bending, and at the same time rather soft and yielding, must undoubtedly be the best in the generality of cases. It may sometimes be necessary to employ one of firmer nature, whilst, on other occasions, the common tent only can be used; but much in this respect must depend upon the circumstances of the case, and be left to the judgment of the surgeon in attendance. A very good bougie for general purposes may be formed by dipping long pieces of lint or fine linen into a mixture of melted lard and wax; and in preparing them they may be imbued with any medicated substance, either by adding this to the liquid, or by again dipping the bougie in a separate mixture before the rolling is completed. I am inclined to think, that in many cases medicated bougies may be used with great advantage; and that, in depending solely upon the known efficacy of pressure, in cases of stricture, the additional advantage that may be gained by the use of topical applications has been too much overlooked."

Tents made of slips of linen may also be introduced by means of a probe after they have been smeared with ointment or dipt in a stiff cerate.

When the existence of the stricture has been ascertained, a reasonable prospect of a cure may be held out, if the health is not broken, and if the disease is not cancerous.

"The patient should be allowed a very spare diet, which should also consist of what is nourishing, and may, in a great measure, be carried off by the skin and kidneys, such as strong soups, &c. Bread and vegetables, in general, should be taken very sparingly,

both because they afford less nutriment in a small compass than preparations of animal food, and where the digestion is not good, produce flatulency, which in all cases of intestinal obstruction is troublesome and injurious. The common messes of milk and arrow root, which are often taken by invalids, should also be avoided where there is a torpid state of the bowels, as in such cases they are apt to form very hardened fæces."

Some mild aperient should be taken regularly to keep the bowels in an easy state. To prevent the accumulation of scybala in the colon, a moderate quantity of warm water may be thrown up daily above the stricture.

At the commencement of stricture it may be sometimes necessary to employ leeches or cupping; and on other occasions an alterative course of mercury may be of service.

"These, however," says Mr. Calvert, "as well as the preceding means, are, of course, only preparatory, or recommended to assist the operation of the bougie; for it is solely by pressure, except in rare cases, where it may be necessary to employ the knife, that we can hope to effect a cure, when once the coats of the rectum have become thickened and permanently contracted.

"With reference to the length of time the bougie should be allowed to remain within the rectum, it must be regulated solely by the feelings of the patient, or rather by the manner in which the act of dilating the stricture may affect the constitution; for he may suffer severely from this cause, without being at all aware that his symptoms can be attributed to it. If the pressure of the bougie, although moderate, cause considerable pain in the situation of the stricture, extending to the groins, the thighs, or other parts; or if, after the bougie is withdrawn, general uneasiness, tremors, and sickness, come on, we may conclude, that in the present state of the patient at least, it will do more harm than good, and the common tent, or the dilated gut, should be substituted. As these symptoms, however, may proceed from violence in using the bougie, in cases where, if judiciously employed, it might be of essential service, it should not be discontinued, when found to disagree, without first trying one of a smaller size, and taking care to introduce it with delicacy and judgment. Indeed, in employing pressure in any form for the cure of strictures of the rectum, it should always be recollected that the disease is in general produced and kept up by local irritation, and that violence of any kind is more likely to increase than remedy the evil. The surgeon should, therefore, be supplied with a number of bougies of different sizes and consistence: and the first that is used should be just large enough to produce a very moderate degree of distention. This may be withdrawn after remaining a few minutes, if it produce much pain or uneasiness; the time being gradually increased afterwards, as the part becomes habituated to the pressure. The size of the instrument must also be gradually increased, in propor-

tion as the stricture is distended, until at last one of the largest diameter can be introduced and retained with ease.

"It often happens, that when the bougie is withdrawn, the patient has an evacuation which is more copious than usual, owing to its acting as a stimulant, and increasing the peristaltic motion of the intestines. On this account, therefore, it is not always proper to obstruct the passage for several hours together, particularly if it be attended with any feeling of uneasiness or distension in the direction of the colon; besides, the contents of the small intestines being propelled forward, may, in addition to what is already contained in the colon, contribute to increase the unnatural distension of this gut, or of the pouch, which is usually formed by that part of the intestine which is more immediately above the stricture."

If there is a narrow, indurated, septum within reach of the finger, it may be divided with the knife in the direction of the sacrum; the fore-finger of the left hand acting as a guide to the probe-pointed bistoury. In all other cases, if not cancerous, pressure may be employed in almost any form. In cancer, Mr. Calvert informs us, all that a medical attendant can do, is to administer consolation to his patient, and endeavour to mitigate his sufferings. The best means of doing this will readily occur to the practitioner.

The author now finishes his second chapter with some remarks on those affections which seem to depend on stricture, though occasioned by some other causes; such as concretions, or the accumulation of hardened fæces in the rectum; but there is nothing new in his remarks.

*Morbid Contraction of the Anus.*—This is by no means an uncommon complaint; and it may be connected with organic disease, or proceed from an undue contraction of the sphincters.

"Sometimes," says Mr. Calvert, "the contraction is owing to a thickening and gradual disorganization of the fine skin within the anus, extending from the external margin to the lower part of the rectum. The surface is rough and partially ulcerated, with an unhealthy discharge; and, in some cases, the thickening of the skin is not only deep, but has almost a cartilaginous hardness. I have seen but few cases of this disease, and as they did not appear to yield either to internal remedies, or to topical applications, I am inclined to think it is generally incurable."

It is thought to have some connexion with syphilis; but it does not yield to mercury. To illustrate some facts connected with it, the author has favoured us with the following case:—

"Mrs. ———, aged forty-five, was, about four years ago, afflicted with an unpleasant sensation about the verge of the anus, which was increased on going to stool. As she had formerly been subject to piles, she was willing to attribute her present complaint

to this cause, until the contracted state of the anus, from the progress, giving rise to a train of suffering, she applied to a surgeon at the west end of the town, who, after inspection, gave it as his opinion that the disease was venereal; and as she had reason to suppose that she had some time before suffered in this respect from the irregularities of her husband, she submitted readily to undergo a course of mercury, which was proposed for the cure of it. During the influence of this remedy some cutaneous eruptions, and other symptoms of a suspicious nature, entirely disappeared, but little or no change for the better occurred with respect to the disease itself, whilst the contraction it occasioned appeared, if any thing, rather progressive. About six months after this, I saw her for the first time. She then complained of suffering from severe pain and difficulty when at stool; that her evacuations were numerous, but scanty, irregular, or rather of a ragged appearance on the surface, when there was no purging, and generally smeared with a bloody matter. On examination I found that the margin and inner membrane of the anus were converted into a hard, extremely irregular, and partially ulcerated excrescence, which extended upwards, and terminated immediately above the upper part of the internal sphincter muscle, where the intestine had a defined and cartilaginous hardness. The act of introducing the finger caused considerable pain, in consequence of the narrowness and extreme irregularity of the passage, and a slight discharge of blood followed.

“As her general health was tolerably good, it would have been useless, under these circumstances, to employ the bougie; and although, from the history of the case, there was reason to suppose that the change of structure was connected with a venereal taint, yet, as the use of mercury had been previously pushed to a considerable extent, it did not appear advisable, nor was she willing, to have recourse again to the same remedy. I therefore gave her some general directions respecting her diet, prescribed moderate doses of castor oil, so as to soften the excrement, and produce a sufficient discharge from the bowels to prevent any accumulation from taking place, and introduced daily a small tent of lint, smeared with mercurial ointment. Under this treatment the complaint appeared to improve, at least the contraction did not increase; the matter which adhered to the tent put on a more healthy aspect, and the evacuations, without causing so much pain, were less frequent and more abundant. These circumstances, together with a corresponding improvement in the strength and appetite of the patient, induced me to speak more decidedly respecting the successful termination of the complaint than the subsequent experience on this, and two or three other cases of a similar nature, would have authorized. The improvement was only temporary; for, after some time, the disease began to extend more into the rectum; the passage became gradually so narrow and irregular, that it was very difficult, as well as painful to the patient, to introduce even the smallest sized tent, and the extreme torture she endured from a motion, deterred her

from taking solid food of any description. By degrees, however, the abdomen became tumid ; she lost all inclination for food, every thing was rejected by the stomach, and after suffering for a considerable time she died, apparently from exhaustion."

Mr. Calvert has seen other three cases, similar to the above ; two of them in prostitutes ; and these two, he believes, terminated fatally.

In many cases, there is merely a thickening and consolidation of the firm skin of the anus, and of the adjacent cellular membrane, without any disposition to spasm, or specific strictural disease. But if, in consequence of constipation, a prolapsus ensue, the sphincters by degrees become morbidly contracted, and thus add very considerably to the straitness of the passage. This form is generally the effect of chronic inflammation, or of long continued irritation, and frequently occurs in persons who are subject to hæmorrhoids. With care it is seldom troublesome.

" Sometimes we find the anus morbidly contracted, without any material change of structure, any thickening or induration, at least at the commencement of the complaint ; the contraction arising solely from the state of the sphincter muscles, the fibres of which being over-distended, or ruptured by the passing of hardened fæces, become sensibly contracted in consequence, and are painful when any attempt is made to distend them. This state of the parts has, with careless observers, led to the belief that there is some degree of organic stricture, particularly as, when the inflammation and tenderness are past, the bougie is found to effect a speedy cure. The patient has, for some time past, suffered from costiveness, with a degree of pain and difficulty when at stool ; and, after much pain and exertion, one or more knobs of indurated fæces, of a flattened form, are passed with some degree of uneasiness ; he perhaps applies to his medical attendant, who generally concludes that the symptoms are owing to piles, or that there is a stricture of the rectum, and, from motives of delicacy, is induced to prescribe without having recourse to an examination. Should a brisk purgative be given, the complaint may pass off immediately, and it may excite no further attention ; but, under other circumstances, the bougie being introduced by the patient himself, and the passage gradually dilated in consequence, the patient, and sometimes even the practitioner, moulding their judgment by the very speedy relief afforded from the use of the bougie in this solitary instance, are seduced into a belief, that dilatation in all cases of stricture of these parts is very easily effected. This painful contraction of the anus is not unfrequently the consequence of inattention to the calls of nature on the part of the patient. Many persons, particularly when earnestly engaged in severe and sedentary occupations, are sometimes apt to resist the desire of going to stool until it suits their convenience, when, in general, it goes off entirely, and is not

renewed, perhaps, until the following day. In the mean time, the fluid parts of the excrement are rapidly absorbed, whilst the indurated mass that remains, being accumulated in, and moulded to the more capacious part of the gut immediately above the upper limit of the internal sphincter muscle, cannot be discharged without violent efforts, and great distension of the anus, which is followed by a degree of tenderness and contraction."

But the most painful of all the contractions of this part, is that which depends upon spasmodic action of the sphincter muscles. Many practitioners have very imperfect notions of it, whilst others have passed it over almost unnoticed. In cases unconnected with hæmorrhoids, it seems to have commenced with some degree of smarting pain, and a feeling of resistance at the anus during an evacuation. After some time these symptoms grow much worse.

"On examination the stools were found exceedingly small, flattened, and instead of being forced out perpendicularly, appeared to have taken a curved or spiral direction. The state of the fæces, however, was not always uniform, even in the same case, inasmuch as they were sometimes considerably larger than they had been previously, whilst, on other occasions, they were as fine as the smallest tape; in the former case they were often emitted with a degree of rapidity and violence, but in the latter very slowly, and with great exertion. These circumstances, in conjunction with others, show the difference between this form of contraction, and that of organic stricture, in which the evacuations are always nearly of equal size, and similar figure; unless when the disease is situate high up in the rectum, and the contraction is very great, when, as it has been previously noticed, the excrement being passed in scanty portions through the contraction, does not stimulate the gut to contract upon it, until it has accumulated.

"In general, the pain comes on soon after the patient has had a motion, continues for a short time, and does not return until the following day, or still later, if the bowels are not moved in the interim; but in very irritable habits it may be produced by the slightest causes, as in the disengagement of wind, a more than usual exertion, passions of the mind, or by any cause whatever that produces a local or general excitement. Sometimes it is so severe, that it is more intolerable than the pains of labour; and, in one instance, I have seen it give rise to loud expressions of agony from the most determined fortitude."

The pains sometimes assume a periodical character; the interval being spent in that delicious calm which usually follows after intense suffering; whilst in other cases, the patient is never entirely free from uneasiness of some kind. Dr. Baillie has given a well-marked case of it in the fifth volume of the *London Medical Transactions*. People of irritable constitutions are more

liable to it than others; but it is almost always the consequence of local irritation. It also occurs very often in combination with stricture of the rectum.

*Treatment.*—In the treatment of contracted anus we must obviate, first of all, the torpid state of the bowels, which is generally the remote cause of the complaint; and if inflammation exist in the vicinity of the anus, it must be reduced in the usual manner. If fissures are detected, and they should be carefully sought after, they must be touched with the sulphate of copper, or a strong solution of the nitrate of silver, and then a tent made of lint, and smeared with simple ointment, should be introduced within the anus, the inner membrane and the fissures being previously cleansed from unhealthy secretions or other matter. When nothing but thickening and induration remain, the bougie will generally complete the cure. When there is a change of structure, other means will be necessary, and in particular the use of mercury, if there is a suspicion of a venereal taint, but when the disorganization has gone a great length, little can be expected from any remedy. When the contraction is caused by obstinate spasm of the sphincters, Boyer has advised that they should be divided with the knife, and that a large bougie be introduced after the division; but our author objects to this operation, as he had seen it performed in one instance with little or no relief to the patient. But should the operation be determined on, as fissures are generally present, the knife should be carried through the principal one, provided it is not at the anterior verge of the anus. It is a disease, however, which has been known to disappear spontaneously, even after the most powerful remedies of all kinds had been employed in vain. Mr. Calvert thinks that in many instances it may be considered as a species of *tic douloureux*; and that, therefore, after the digestive organs have regained a healthy action, carbonate of iron or sulphate of quinine may be productive of much advantage.

In cases of inflammatory stricture of the anus, where a vast quantity of *fæces* had been accumulated in the rectum and colon, with the supervention of cold perspirations and a vomiting of feculent matter, the anus should instantly be divided; and this operation our author has seen performed, under similar circumstances with the relief of the distressing symptoms. The application of cold water, externally and internally, has also, in many cases, been of the most salutary service. In every case, search should be made in the rectum for strictures, as they are in most instances connected with contraction of the anus, and it is idle to expect a cure of the one, if the other remain untouched. In contracted anus from spasm, the bougie has, in



general, been productive of harm, rather than advantage; yet from the following remarks, it appears that Mr. Calvert is rather partial to its cautious employment:—

“Although,” he says, “the act of introducing the finger or the bougie always occasions great pain, yet it does not follow that it should continue to do so, if used with caution, and when the circumstances of the case have been properly considered. If the bougie will not effect a cure in cases of spasmodic contraction (for when there is much inflammation it would not of course be employed), it will be found not altogether useless on many occasions; and certainly of great advantage in subduing the predisposition, which appears to exist in some individuals to this complaint.”

*Prolapsus Ani.*—In young children, this affection appears like a small vascular tumour round the anus; in the adult it generally forms one or two loose flaps of a pale colour, or extends in a tabular form from the whole margin of the anus. Its progress is more gradual in the adult.

“Occasionally a great portion of the rectum is torn from its attachment, and everted, forming a large round tumour nearly equal in size to the fist, and containing in some cases a portion of the peritoneum; whilst at other times, although this happens very rarely in comparison, the colon, together with the cæcum, and even some portion of the ileum, have formed the bulk of the tumour.”

After some remarks on the anatomy of the rectum, and the parts connected with it, Mr. Calvert inquires into the causes of the complaint.

“Any thing,” he observes, “therefore, which has a tendency to produce relaxation of the rectum, and of the parts about the anus, must necessarily predispose to the occurrence of a prolapsus; and hence we find, that this complaint is much more common in infants at the breast, and in elderly persons of debilitated habit, than in those who are in the summer of life, when the muscular fibre and cellular tissue throughout the body possess a much greater degree of firmness and elasticity. It is also a very common complaint with those who have been subject to hæmorrhoids, by which the internal membrane, near the orifice of the gut, being preternaturally distended with coagula or infiltrated fluids, during the paroxysm, remains flaccid when the afflux of blood to this part has ceased, and is then easily protruded. In these cases the tumour, resembling in general one or two masses of loose integument, is formed very gradually, and can never be wholly returned into the gut, or removed, except by an operation. It constitutes what is usually termed the chronic prolapsus of adults, and although it may sometimes produce but little inconvenience, yet it often excites a degree of irritation, and increases the relaxed state of the sphincter muscles; so that when a hardened motion is passed with straining, or, indeed, from less powerful causes, an additional prolapsus of

the inner membrane, or of both tunics, very frequently takes place, and the patient is then induced, perhaps for the first time, to have recourse to surgical assistance. Long continued costiveness, the frequent use of warm or stimulating injections, indolent habits, and protracted disease of any kind, may contribute either more or less to the same end, by producing gradually a state of permanent relaxation and debility, favourable to the operation of the exciting causes."

It may also be produced by irritation of the rectum, from ascarides or any other cause, or by sympathy from the irritation of a neighbouring part. It may be induced also by palsy of the levatores ani and sphincter muscles, in consequence of blows or disease of the vertebral column. When it has appeared once, it is always liable to return; and if the prolapsus has by any cause become strangulated, it is followed by a train of dangerous and distressing symptoms, and it generally carries off the patient. Hence the propriety of always replacing a prolapsus without delay; for even if it should not sphacelate, it remains a compact indurated mass, and incapacitates the patient from every useful occupation. But when prolapsus takes place in the form of volvulus it is by far the most dangerous; luckily, however, it is of rare occurrence.

It is surely not necessary for us to enter with our author into the minutiae of reduction. Warm fomentations to the prolapsed part have been recommended by some, with the view of relaxing the anus, but they are condemned by Richter, who prefers the application of cold. Mr. Calvert, however, thinks that flannels, wrung out of hot water, may be laid upon the nates and perinæum with advantage. But when hardened fæces are pent up in the large intestines, they must be brought away by clysters, when, in general, the reduction will be made with ease.

"It sometimes happens, that the difficulty of effecting the reduction arises more from a spasmodic action of the abdominal muscles, producing an involuntary effort to reject the prolapsed part as soon as it is returned. In such cases, the warm bath, or semicupium, a large dose of æther and opium, or the fumes of tobacco, and general blood-letting, when the patient is of a phlethoric habit, should be employed. The use of tobacco fumes, however, should never be resorted to under any circumstances without the utmost caution, as the immediate consequences are often very alarming, and may threaten the life of the patient."

In some cases, Mr. Calvert talks of scarifying the surface of the tumour, and in extreme cases, of dividing the sphincters.

When the tumour has been replaced, it is hardly necessary to observe, that every source of irritation should be removed;

worms, for instance, by stimulating injections, and hæmorrhoids by ligature. To these last our author attributes by far the greater number of prolapsus. Laxity of the inner membrane of the rectum in adults may be remedied by astringent injections, and in children by a solid nutritious diet. In bandages the author appears to have little faith. As the occurrence of inflammation sometimes braces relaxed parts, Mr. Calvert recommends, when other means fail, the removing with the knife portions of the inner loose membrane of the rectum, care being taken not to include any part of the fine skin of the anus.

We have not room to follow the author on the subject of volvulus or intussusceptio; but we have not observed that he has advanced any thing new on the subject.

*Fistula in Ano.*—The treatment of this disorder has been brought almost to perfection by Pott and the French surgeons; but Mr. Calvert laments that their principles and practice are either not generally known, or are not attended to. The collections of matter which may form about the anus, and eventually give rise to fistula, are thus arranged:—

“The simple phlegmonous abscess; the gangrenous abscess; and those more chronic collections of matter that take place, in greater or less quantity, from ulceration near the lower extremity of the gut, or that are connected with other diseases.”

We extract the description of the second of these, the gangrenous abscess.

“It has sometimes, at the commencement, the appearance of phlegmon, but more generally it has more or less of a distinctive character from the first. In the latter case it is invariably attended with a great degree of restlessness, and other signs of general irritation; the fever runs high, and the patient is often affected with a distressing vomiting. The appearance of the tumour is very different to that already noticed, being less prominent and defined, and the skin that covers it is of a dusky or dark pinky hue, extending insensibly into the surrounding surface, and acutely sensible to the touch. The matter is in smaller quantity than might be expected, very unhealthy, and, instead of being accumulated, is very often distributed in an irregular manner immediately beneath the skin.

“In some cases the skin and subjacent cellular tissue lose their natural firmness and elasticity; the dull red colour of the integuments extends, and sloughing takes place to a considerable extent; but more frequently, with the same appearance, the surface retains its usual feel, whilst the violence of the diseased action is expended upon the cellular tissue beneath. From an extension of irritation to the surrounding parts, the urethra and bladder become affected; the patient is tormented and alarmed by strangury, retention, and sometimes suppression of urine, and troublesome tenesmus. If the

patient be subject to piles, they are generally aggravated at this time; the bowels are obstinately costive, and the sphincter muscles are sometimes affected with a painful spasm, that continues without intermission, or comes on at intervals in violent paroxysms. As the disease proceeds, the pulse, which at first was hard, full, and elastic, gradually becomes weak and fluttering; there is a general loss of power and mental exhaustion indicated in every attitude and motion, but more especially in the countenance, in which the intense brightness of the eye is strongly at variance with the physiognomical expression; and if a favourable change be not very soon produced, by a vigorous application of the means that will be pointed out, the constitution continues to sink, and the patient expires.

"This state of parts usually occurs in those whose health has been broken by former intemperance, and its formation is not unfrequently aided by a want of cleanliness, or by confinement in close rooms, where the air is contaminated by noxious effluvia."

It is surely needless, at the present day, to trace the progress and termination of the various abscesses which form about the anus, and end in fistula; but we may observe, that they are usually connected with piles, or chronic inflammation existent in the inner membrane of the gut. They frequently occur as idiopathic affections at the conclusion of some other disease; and in elderly persons, or in those who have led an irregular life, they denote a bad habit of body.

Even the most simple abscesses of this part require attention, and though the general plan of treatment is the same as for abscesses in other parts, "it is always proper to make even more than a fine opening along the most dependant part of the tumour," when an opening is judged necessary.

"In the gangrenous suppuration, the chief means of treatment consist in making a free opening at an early period, so as to give a ready exit to the slough and matter; and when the state of the parts approaches to the nature of carbuncle, or in other words, when there is a tendency to deep and extensive sloughing, this operation is doubly indicated. The lancet should be introduced through the diseased mass, and carried in such a direction as to leave no lodgment whatever for the matter, and afford ample room for the free application of the dressings. Mildly stimulating poultices, with anodyne fomentations, should be applied, and changed frequently, and such general remedies administered as will tend to correct the constitutional disorder.

"If, notwithstanding these means, the parts become more flabby and less sensible, the pulse weak, irregular, and fluttering, and there is great depression, with shivering, low delirium, and drowsiness the patient may be considered in the most imminent danger, and more active remedies, without loss of time, should be resorted

to. Wine, brandy, with ammonia and bark, should be given in large quantities, whilst a free current of air is kept up in the chamber, and the parts are assiduously bathed with hot spirituous fomentations.

“ With regard to the use of stimulants in such cases, it may be useful to observe, that they should be varied or alternated, as they are apt to lose their efficacy by repetition. This fact may appear of but little importance, or perhaps too obvious to require particular mention, but it is not always borne in mind in practice; and in more than one instance, I have had occasion to remark the very great advantage that may be drawn from it. If circumstances will allow it, the patient should not be informed of his danger: hope is often the sole anchor of life in this state; and to deprive the patient of its cheering influence can, in general, answer no useful purpose, even in a moral point of view; whilst in other respects, although he may be but imperfectly sensible, it may prove very pernicious.”

In the retention of urine which attends it, the catheter should not be used without absolute necessity. Even in such cases the constitution may rally, and the parts may even heal without an operation.

*Operation.*—The operation for fistula, and that not long ago, has been frequently performed where the parts would have healed without it; and, even at the present day, in Mr. Calvert's opinion, some surgeons, from ignorance or the mere pleasure of operating, have made their patients undergo a painful operation. Such things, we have no doubt, may from ignorance or selfishness happen; but not, we presume, from the other cause here assigned for them. M. Faubert's *Memoire sur les grands abcès du fondement* is here mentioned by our author in high terms of approbation. If read attentively, it may perhaps serve to dissipate that idle terror which is apt to lay hold of the minds of men when the very name of fistula is mentioned; a name which has given rise to much injudicious practice. In some cases, too, an ulcerating sinus near the anus, especially in elderly persons of an infirm constitution, cannot be healed without risk; and unless it be a source of great uneasiness, it should be allowed to remain.

“ Whenever,” says Mr. Calvert, “ fistula in ano is evidently connected with, or arises from, a disordered state of the constitution, the operation may succeed, but the result will, in general, be much more satisfactory, and the risk of inducing any other disorder much less, if we previously succeed in palliating this state, and in restoring even a temporary degree of tone to the system. If the digestive functions are but imperfectly performed, a small quantity of the blue pill combined with rhubarb, and alternated with moderate doses of castor oil every other night, may be given with advantage,

whilst, at the same time, the diet should be strictly attended to, and some bitter infusion, combined with a grateful aromatic, exhibited. The general treatment, however, in such cases, must of course depend upon a variety of circumstances, which it is wholly unnecessary to mention; but it may not be useless to remark, that all purgatives are very injurious. No reputable surgeon, it is conceived, would undertake an operation without considering the state of his patient's health; and the necessity of paying some attention in this respect is to no cases more applicable than to those in which the rectum is implicated."

The author has given an excellent description of the operation with the knife, which, however, should be employed only when the sinus is not deep; otherwise it may be followed by a troublesome hæmorrhage. In ordinary cases, this seldom happens.

"If, after the operation, the divided parts are allowed to bleed for a short time, the wound is not too much crammed with dressings, and the patient is kept cool and quiet, bleeding will very rarely occur to any considerable extent; but when the contrary method is pursued, it is almost a necessary consequence; and if, under such circumstances, an attempt be made to check it, the evil is often increased instead of remedied."

Where such a mild treatment fails, recourse must be had to pressure or the actual cautery.

With regard to the operation with the ligature, we have room only for a short extract.

"The chief objection to this operation is the irritation it may occasion, being sometimes succeeded by symptoms that are rather alarming. On this account, or perhaps for other reasons, the ligature is generally employed only by empirics, to whom patients are more readily induced to apply, from the agreeable promise of receiving a perfect cure without cutting. There are cases, however, in which this mode of curing fistulæ is decidedly preferable; and if some eminent surgeons have not recourse to it on any occasion, it is owing either to a partial consideration of the subject, or to one of those combinations that occasionally warp the judgment, and turn the current of medical opinion without sufficient grounds or ultimate advantage."

Some surgeons prefer the leaden wire to the silken cord, as it gives much less irritation in recent cases; but whether the wire or the cord is used, care should be taken not to have it too tight. Upon the whole, however, in the far greater number of cases, the knife is preferable to the ligature.

*Ulceration of the Rectum.*—"The most common species of ulceration," he observes, "is that which takes place in consequence of irritation from some local cause; it is often very superficial, and as

the inner surface of the rectum is more tumid and vascular than usual, the sore itself is not always easily distinguished even by inspection. The patient is affected with pain and smarting, but not in any violent degree; the tenesmus, however, is sometimes very troublesome, and the irritation extending to the bladder and loins prevent him from taking exercise with any degree of comfort. These symptoms, together with a discharge of mucus or purulent matter with the evacuations, necessitate an inspection, for it is impossible to be satisfied of the position or the existence of ulceration by merely examining the gut with the finger.

"Sometimes the ulceration has more of a chronic character, the surface is also superficial, but glossy, like a common indolent sore in any other part of the body. This form of ulceration, as well as the preceding, is usually found in connection with hæmorrhoidal tumours, excrescences, or prolapsus of the inner membrane, and appears to arise from an imperfect circulation in the parts, or long continued irritation. In many cases it appears to take place subsequent to or in conjunction with chronic inflammation of the mucous membrane, when the situation and extent of the disease is not difficult to ascertain (if brought into view), in consequence of the dry and dusky red appearance of the former. This state of the parts is usually accompanied with a dry costive state of the bowels, an impaired appetite, and other symptoms arising from a torpid state of the intestines. In general there is not much pain in the gut; and although the patient is often troubled with tenesmus in a certain degree, yet this, in general, is by no means so troublesome as might be expected from the extent of the ulceration."

But the ulceration is sometimes of a severer kind, and may be termed a phagedenic sore. It is attended by much constitutional irritation. In other cases, there is so little pain, that the disease is known merely by a discharge of dirty matter from the anus; but even here it sometimes proves fatal. The degrees of it are infinitely various; and in dysentery it is sometimes so deep, as to render recovery impossible. On the Continent the ulceration is not unfrequently venereal. In all other cases, it seems to depend on disorder of the digestive functions.

From the constant motion of the part and other causes, the cure is difficult; yet we learn from dissection that many remarkable cures have taken place.

"A few years ago," says the author, "I was present at the dissection of the body of a man, who, when on service abroad, had suffered very severely from dysentery, and appeared to have sunk under the consequences of this complaint, added to an irregular mode of living; numerous cicatrices were found in the ilium, colon, and upper portion of the rectum: in the latter a deep indolent ulcer still remained about three inches from the anus, and a little lower down were two small ones communicating with a sinus."

From supine neglect on the part of the surgeon, the disease has often advanced far, before any thing is done to check its progress.

"Whenever ulceration takes place in the rectum, whatever may be its true nature, or the cause that has contributed to produce it, there are some general rules that must always form a part of the medical treatment; namely, to lessen as much as possible any inordinate action or distention of the gut; to restore the healthy state of the secretions which are mingled with the aliment, as the biliary secretion, &c., and to prevent the ulcerated surface being abraded by hardened excrement. To fulfil these indications, the patient should second the operation of such remedies as may be conceived proper for his case, by paying the strictest attention to his diet. It is not possible to point out a diet that would be even generally applicable, as so much must depend upon the state of the constitution and the previous habits of the patient; but in general it should be moderate in quantity, yet sufficiently nutritious—what the stomach can digest with ease, and has no tendency to produce constipation. The patient should be enjoined to take moderate exercise; and if the bowels are disposed to be confined, their action should be aided by exhibiting some mild aperient, such as the patient has found by experience to agree with him; but never in such quantity as to produce purging: castor oil is the best remedy in these cases, but the patient cannot always retain it upon the stomach. Instead of costiveness, a contrary state of the bowels frequently exists, or at least there is such an irritable state of the mucous membrane of the intestines, or of the digestive organs in general, that the least change of weather, or the most trivial causes, will produce diarrhoea. In such cases, the appearance of the alvine discharges will afford some criterion for the practice that is to be adopted. Moderate doses of the blue pill, with some light tonic medicine, and attention to diet, will often answer the purpose, by moderating the disordered action, and correcting the weakness on which the excessive irritability chiefly depends; but the practice must necessarily depend upon a variety of circumstances.

"In cases of common indolent ulcers, a cure may in general be effected with little trouble by topical applications only. Lint steeped in moderately strong solutions of the sulphate of copper, or the nitrate of silver, will generally answer the purpose better than any thing else, particularly when the ulceration is immediately within the anus; as they can be kept almost constantly applied to the surface: in other cases the same applications may be employed in the form of injection, and if these fail, we may generally succeed in effecting a cure by introducing daily a small roll of lint, smeared with some gently stimulating or astringent ointment, within the rectum. Should the edges be very much indurated, and they can be sufficiently distinguished by means of the speculum, they may be touched with the lunar caustic."



*Excrescences, &c. about the Anus and within the Rectum.*—On this subject we must be brief. To these excrescences a variety of names has been given by the ancient authors; and, in Mr. Calvert's opinion, to very little purpose. We shall notice the principal of those which he has mentioned.

"When," he observes, "the lining membrane of the anus has been for some time irritated, and often inflamed, either in consequence of being protruded, as in cases of hæmorrhoids and prolapsus ani, or by some acrid secretion from the rectum or the membrane itself, small fleshy excrescences more or less numerous often arise, and sometimes attain a considerable size. These are generally of a greyish red colour, but situated within the sphincters, they are not unfrequently of a darker hue; they differ also in density, but in general they are rather friable, and easily made to bleed."

Though they have some resemblance to hæmorrhoidal tumours, their internal structure has been formed very differently; but sometimes a true excrescence has grown upon what was previously a common hæmorrhoid.

"In such cases the margin of the anus is often protruded, in the form of a prominent fleshy mass, with an irregular surface, sometimes studded with bluish tubercles; and not unfrequently the excrescence becomes excoriated, ulcerates, and discharges a purulent or a thin unhealthy matter. Under these circumstances the disease has sometimes been mistaken for cancer; but this can only arise from ignorance or inattention."

Small wart excrescences, sometimes rise from the inner membrane of the anus. They contract the orifice, and, besides giving pain to the patient when he goes to stool, are attended with a constant oozing from the anus. When the finger is introduced they feel rough and uneven. These have been mistaken for stricture, supposed to spring from a venereal cause.

"If the patient, however, be made to strain downwards, the appearance of the excrescence, and of the fine skin of the interspaces, will be sufficient to show the true nature of the complaint, which although very distressing is comparatively harmless."

"Fleshy excrescences on the common integuments about the anus are soft and spongy, possessing an imperfect vitality, and but little feeling; but sometimes they are more solid and better organized, requiring other means of cure than those which usually answer in cases of cuticular excrescence."

Others, small, red, and nipple-shaped, rise occasionally from the same place, and frequently are owing to a want of cleanliness.

"Polypi, soft red fleshy tumours, and others of a scrofulous nature, are occasionally formed within the rectum, at a greater or less

distance from the orifice, and may prove fatal solely by the irritation they cause, independent of any particular diseased action with which they may be connected. The formation of the tumour is seldom attended with much inconvenience at the commencement; but after it has attained a moderate size, and may be felt pendulous, or projecting from the parietes of the gut, the patient begins to be affected with a heavy dragging pain at the seat of the tumour, pains in the abdomen, and a frequent desire to go to stool, at which time the substance of the tumour may, under some circumstances, be forced without the anus, or even torn from its attachment. By degrees the digestive functions become affected, and after the patient has for some time suffered from the train of unpleasant symptoms consequent to this state, diarrhoea and hectic fever supervene, and he is reduced to a state of emaciation and extreme debility."

To cure these excrescences, either the knife or ligature may be employed, and generally without the risk of inflammation or hæmorrhage.

"If there are several excrescences of varied size, the best plan is to remove them with the scissors; but when there are not more than two or three, these are pendulous, and the patient has great objection to have them cut off, they may be included in separate ligatures."

In many cases the ligatures will be preferable.

"In two instances I have seen some large condylomatous tumours cured by puncturing them with the common lancet, and by exhibiting colchicum internally. The tumours withered away gradually; but how far this was aided by the operation of the above remedy, I cannot pretend to determine."

The irregular fleshy mass which forms round the verge of the anus should be removed with the common scalpel, being first included in a double ligature. The small warty excrescences arising from the inner membrane of the anus, must be cut off with the blunt-pointed scissors, tents, smeared with an astringent ointment, being afterwards introduced, and the cure to be completed with the common bougie.

"The cauliflower and warty excrescences, which spring up in numbers from the common integument about the anus, as well as from a considerable portion of that covering the adjacent parts, extending even to the pubes, may often be destroyed by sprinkling them with a powder, composed of the ærugo æris and pulv. sabinæ, by dressing them with ointment, containing the oxymuriate of mercury, the sulphate of copper, &c., or by applying daily the nitrate of silver, or acetic acid to their surface. Such as do not readily give way to these or similar means, may be removed with the common scalpel, which, in such cases, is always preferable to employing a ligature. The bleeding, however, is generally considerable, and will require some little attention."

Tumours within the rectum will require the ligature.

"I have seen," says Mr. Calvert, "a solid tumour as large as a pullet's egg, successfully removed by the ligature, although it was as much as five inches from the anus; and the patient recovered without any disagreeable symptom. In another case of tumour, rather lower down in the gut, the ligature was also applied, but the patient afterwards sunk under the local irritation, and the diarrhœa that came on after the tumour had separated."

Before performing any of these operations, the orifice of the gut should be gradually dilated with the bougie.

Such is our epitome of Mr. Calvert's volume. Like a man intimately acquainted with his subject, the author writes with great fluency and easiness of style, and interests his readers, at the same time that he instructs them. We recommend to him, however, in his next work (for we hope to have the pleasure of meeting with him again), to give more precision to his ideas, and more compression to his matter; and, if possible, if he wishes to be a popular writer, to use, on no occasion, such long-winded sentences, as that in pp. 224-5, and to avoid phrases, of which we have seen several, that are not strictly grammatical. But while we speak thus freely, we must allow that Mr. Calvert has displayed great research in the composition of his volume. We pretend not to enumerate the authors he has ransacked, but we may mention, among the ancients, Hippocrates, Celsus, Aetius, and C. Aurelianus; among the moderns of Italy and Switzerland, Jerome Fabricio, Theophilus Bonet, and Morgagni; of Germany and Holland, Sulpius, Hoffman, Ludwig, Richter, and G. C. Schmidt; of France, Petit, Le Dran, Chaussier, Desault, Delpech, Dupuytren, Levacher, Boyer, Richerand, David, Faubert, and Ribes; and of England, Wiseman, White, Hey, Baillie, Howship, Copeland, Sherwin, Abernethy, Charles Bell, and Wilson Philip. From some of these he has extracted largely; but he has not thought it necessary to give a minute reference to any of them; and we are inclined to think, that his printing in the notes the original of what he had already given in English in the text, from Latin, French, and German authors, has rather a look of pedantry. We wish, however, to part on good terms with Mr. Calvert; and, in justice to him, we must acknowledge that most of the practical observations we have made, in our analysis of his work, are his own, or belong to the authors he has used.

ART. VI. *Commentaries on Diseases of the Stomach and Bowels of Children.* By ROBLEY DUNGLISON, M.D., &c. 8vo. pp. 200. London, 1824.

The predominant influence of particular organs, or systems of organs in the various periods of life, is a fact which has often been noticed by physiologists, but, for the most part, in general terms, and without any very definite exposition of the duration, extent, and succession of the influences arising from this source. The subject stands in the same predicament with many other points of medical doctrine; a certain series of events necessarily attracts attention, and gives rise to some general ideas, which pass from one individual, and from one age to another, in different shapes, sometimes as known facts, and not unfrequently with all the "glorious circumstance" of new discoveries. In this state the matter remains, until some genius of a superior order collects the scattered and imperfect opinions of others, shews their connection with obscure points of doctrine, and deduces from them useful and practical principles.

We have been led to this train of reflections by the consideration of the preponderant influence of the organs of digestion in the earliest periods of life. The nutritive functions of themselves, then compose the far greater part of that succession of events to which alone the term life can be correctly applied. At all times, exerting a manifest influence over the actions of other organs, the effects of any derangement in the degree or mode of the performance of the digestive functions, is then more decided than ever. Attention to this circumstance is, in infantile diseases, of the greatest importance, and will afford a satisfactory explanation of the most striking differences existing between them and those of adults.

It has often been asserted of late years, that the diseases of children do not receive sufficient attention from the bulk of the profession: those who advance such opinions probably may, in some instances, speak from the result of experience, but for our own part we are inclined to believe that this idea is one of those advanced by some, and repeated by others, without sufficient consideration. We do not pretend to say that there may not be much neglect and indifference on the part of individuals, and readily admit that even the best informed and most intelligent practitioner must often have cause to lament the imperfection of his own knowledge; we merely wish to enter a dispassionate protest against general statements, which do not rest on any

firm basis, and which do not appear calculated to answer any good purpose. In the case in question, we believe that the very reverse of the statements made in relation to it will be nearer the truth, and that there is not any class of diseases which are treated by the profession in general, with more judgment and advantage than those of children, notwithstanding the supposed obscurity of their appearances, and the difficulty of discovering their symptoms; obscurity and difficulty which, without making any pretensions to infallibility, we are very far from admitting.

Dr. Dunglison's work contains nine chapters:—1. Of Intestinal Worms; 2. Of Constipation; 3. Of Acidity, Flatulence, and Colic; 4. Of Diarrhœa, Procidencia Ani; 5. Of Vomiting and Cholera; 6. Of Aphthæ; 7. Of Inflammation of the Stomach; 8. Of Inflammation of the Intestines; 9. Of Intussusception. It is preceded by an account of M. Jadelot's System of Physiognomical Symptomatology, as it is called, which is to serve as a *royal road* to the detection and cure of the diseases of children. We do not take upon ourselves to give any description of this doctrine; our only acquaintance with it is through the medium of the quotation which Dr. Dunglison makes from M. de Salle's Translation of Underwood on the Diseases of Children, and this we must say is very far from affording a clear idea of its nature, and might have been omitted without disadvantage to the work. We may, however, state, that according to M. Jadelot, the countenance of children, when in a state of disease, presents three traits, or forms of expression, which he calls by the strange names of "oculogygomatic;" "the nasal or genal;" and, "the labial."

"Of these, the first mentioned is the index of disorders of the cerebro-nervous system; the second, and accessory, signalizes those of the digestive passages, and of the abdominal viscera; the third, is the concomitant of diseases of the heart and air passages."—DUNGLISON, Preface, p. 9.

On such scanty, imperfect, and useless information, it would of course be unfair to institute any very rigid criticisms, though we will also allow that in the hands of its inventor, the system might prove more advantageous than in the practice of the uninitiated; but we almost suspect that the profession on this side of the water will be inclined to rank it among the thousand and one wonders which are imported to make the world stare for a moment, and then to be forgotten for ever.

*Worms.*—in his Chapter on Intestinal Worms, we have not been able to detect any thing wearing an appearance of novelty. The sketch of their specific characters and habits which it con-

tains, is derived from Rudolphi and Frank, from the latter more particularly, (who, by the way, is himself but a copyist on this subject) an obligation which Dr. Dunglison has not forgotten to acknowledge by suitable references. We would suggest to him, that in case his work should ever happen to reach a second edition, this section might be materially improved by a more extensive selection from the admirable work of Brera. The subject has unfortunately been, in many instances, treated either by naturalists who were not physicians, or by physicians who were not naturalists. Brera's book appears to us to be almost the only one which combines the advantages arising from both sources. The researches of naturalists, in this instance, have not afforded any assistance to the practice of medicine: the symptoms arising from the presence of the various kinds of worms, do not present any difference by which we might be enabled to form a judgment of the species actually present; nor are we aware that any advantage would be the consequence, if the case were otherwise. The treatment of verminous diseases has hitherto been wholly empirical, and there does not appear to be any reason to suppose that it will ever become otherwise. The discovery of the anthelmintic qualities of the oil of turpentine will probably supply, as nearly as it is reasonable to expect, the desideratum of a certain vermifuge process.

*Treatment.*—A very common error has prevailed in the treatment of the diseases connected with the presence of intestinal worms: too much attention has been devoted to the attempt of removing the effects, whilst the cause has been overlooked or neglected. It will often happen that worms will continue to be voided in immense numbers from the action of suitable medicines, and with temporary relief from the most urgent symptoms; but if the treatment be remitted, the sufferings of the patient return with their original violence. Probably in all cases, but certainly in those to which we have alluded, there is a peculiar state of the system which favours the production of worms. This state would appear to consist in a debilitated condition of the organs of digestion, and many of the symptoms of what are called verminous diseases, have as much claim to be considered as depending on this cause, as on the presence of worms. It has even been suggested, and not without some appearance of justice, that the long continued use of powerful vermifuge medicines may indirectly tend to favour the generation of worms by the debilitated action of the digestive organs consequent upon their administration. Dr. Dunglison appears to have adopted a similar view of this part of his subject, and has

insisted on the propriety of attending to this circumstance in conducting the treatment.

"It has been before stated," says he, "that the grand predisponent cause of worms, is a want of due tone and vigour in the system, and in the digestive organs more especially. In the treatment of verminous affections, consequently, the chief attention must be paid to the removal of these, as well as of the other predisponent causes mentioned in a former section. Without this important desideratum, we may destroy, by anthelmintics, one set of these parasites; but others will continue to be produced. The subject of verminous disease should, therefore, respire a pure air, take proper exercise, avoid the use of crude, indigestible, nourishment, and in short, adopt every means of improving the tone of the system. Tonic remedies may be employed to aid the influence of regimen; or, where the latter cannot be obtained, owing to poverty or any other cause, the corroborants may be used alone."—pp. 50, 51.

And again—

"The corroborant remedies most worthy of recommendation are, the sulphate of quinine, the vinum ferri, or any other of the preparations of iron, administered in doses proportioned to the age and capability of the patient. On the tonic treatment, let it always be borne in mind, it is, that we are to depend for the annihilation of the predisposition to invagination. Anthelmintics may destroy the animalculæ which are in a forward state; but whilst a want of due vigour exists in the performance of the gastric functions, a tendency will remain to the development of the ova contained in those viscera, and the unpleasant symptoms occasioned by the adult animalculæ, continue to recur so long as such want of tone persists."—p. 67.

What we have ourselves said, and what we have quoted from Dr. Dunglison, has not of course any claim to novelty, but we think it will hardly be denied that the prevention of verminous diseases, as opposed to their cure, is one of those points which are too frequently forgotten in actual practice, and it is under this impression that we have been induced to draw the attention of our readers to the subject.

*Constipation.*—In his Chapter on the treatment of Constipation Dr. Dunglison takes occasion to eulogize a mode of practice which we should suppose will be as much a novelty to many of our readers as it certainly is to ourselves. On that account we shall notice it, and also because it appears to be one of the very few subjects contained in the treatise on which the author appears to speak from the results of his own experience. The peculiarity of the practice in question consists in the administration of the

powder of aloes, in what are commonly considered very large quantities. Dr. Dunglison was first induced to employ it from the recommendation given of it by Dr. Hamilton of Edinburgh, to whom it had been suggested by witnessing the effects of a composition sold as syrup of buckthorn, but actually consisting of aloes dissolved in treacle. To show its effects and the mode of employing this medicine, we shall quote from Dr. Dunglison.

“A child, of twelve months, after two days constipation, was attacked with sickness, vomiting, and pyrexia: the abdomen was tense and full, notwithstanding a purging of a watery nature, unmixed with feculent matter. Four grains of scammony with two of calomel and a portion of senna mixture, were taken every four hours. On the third day the symptoms continued in about the same state, except that the vomiting and purging had nearly ceased. On the next day, the symptoms were much the same. The medicines, though regularly continued, had not produced any feculent evacuation. On the fourth day the symptoms still persisted. Two enemata had been administered, but brought nothing away except a little mucus from the lower part of the intestinal canal. On the fifth, no evacuation of feculent matter had been produced by the clysters or medicines, although they were all retained; the symptoms of pyrexia were somewhat augmented; the child felt a great disinclination to be moved, and the fulness of the belly was very considerable. A drachm of aloes was now directed to be dissolved in an ounce of simple syrup, and a tea spoonful ordered to be given every two hours, along with one of the powders last ordered, (a grain of calomel with four of jalap.) On the seventh, the whole of the syrup had been taken and retained; and he had this day the first feculent motion since the commencement of his illness. The fulness of the abdomen was somewhat diminished, but the febrile symptoms remained in much the same condition. The aloëtic mixture and the powders were ordered to be carefully continued. On the following day he had two copious, feculent, motions, which considerably reduced the fever: the abdomen became less full, and the child seemed considerably improved. The aloes was now ordered to be laid aside, and half a grain of calomel directed to be given four times a day, along with an aperient mixture. Under the continuance of this plan he became gradually convalescent.

“The patient, it will be remarked, took two drachms of aloes in two days, without any griping or unpleasant symptoms occurring, which could be considered as fairly referable to that medicine.”

In another case three drachms were taken in as many days, before the desired effect was produced on the bowels, and without being followed by any bad consequences. Dr. Dunglison thinks it difficult to determine whether the syrup, with which the aloes is combined, shields the intestines from its irritating



action, or whether the mucus, with which the intestines of children are plentifully covered, acts in the same manner.

We are always unwilling to set theory, or preconceived opinions in opposition to the practical results of observation and experiment. But even admitting that the mode of treatment above given may be occasionally serviceable, it cannot be denied that it wears the appearance of being hazardous, and that it should be adopted with considerable caution, until such time as a more extended set of trials shall have furnished sufficient grounds for pronouncing on its real merits.

On the treatment of diarrhœa, Dr. Dunlison has brought together the opinions of most of the best writers on the diseases of children. He has given a caution on the employment of opiates, in which we entirely coincide with him.

"In other cases," says he, "purgatives have appeared to afford no relief, and the disease (watery gripes,) has rapidly yielded to the use of anodynes, and the testacea. Opiates should, however, be administered with the greatest caution. I have myself lately witnessed two cases, in one of which a drachm of syrup of poppies, and in another a powder containing a quarter of a grain of opium, proved fatal to young infants; and a case is referred to by the late Dr. Clarke, in which forty drops of Dalby's Carminative were attended with equally disastrous results."—p. 141.

We do not think it by any means necessary to enter into a more extended review of Dr. Dunlison's work. His personal experience of the diseases of which he treats is evidently far from being extensive, and the profession is now inclined to look for something more in a new work than the repetition of ideas, excellent in themselves, but accessible to every individual. Dr. Dunlison has the merit of not being ashamed to confess his obligations; his numerous quotations are precisely indicated. His principal fault, one that is common enough at the present day, consists in the extravagant importance he attaches to every idea, however common place, antiquated, or incorrect, which comes from abroad; but of this, a little time and some experience may probably cure him. As he appears to have a peculiar leaning to every thing French, we recommend to his notice a quotation from a celebrated French writer.

"Que sert de redire des choses déjà mille fois répétées?—L'érudition est un cadre pompeux, qui ne me paroît servir souvent qu'à distraire l'attention du lecteur de dessus le tableau qu'elle embellit. Otez de la plupart de nos Mémoires les pages qui y sont données à une inutile éloquence, celles que l'érudition y usurpe, et celles que la stricte discussion de l'objet reprouve, qu'y restera-t-il souvent?"—*Bichât*.

In his fondness for the French, he has not forgotten to imitate their usual affectation of learning, and of quaint expressions, some of which are in the very worst taste, such as, the "ablation" of porter, p. 103; "scrofulous vice:" p. 188; and such phrases as "to seldom do," "to carefully attend," besides the interlarding of common French phrases, like a school-boy.

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ART. VII. *Physiologie de l'Homme*, par N. P. ADELON, D. M. &c. &c. Paris, 1824. Vol. IV.

We have once already taken a cursory notice of M. Adelon's work on the occasion of the publication of the two first volumes. It is now completed, and its unusual extent (four thick volumes), together with the manner of its execution, gives an unusually enlarged view of the science, and enables the author to enter into the discussion of its minutest details. We think, in fact, that one of the greatest defects of the work consists in this particular, and that M. Adelon, like many other writers, seems to have forgotten that the tendency of the public mind in the present day is to look for the establishment of principles alone in treatises, and to leave the application of them, when once fairly laid down, to the ingenuity of the student, at least as far as regards the mass of individual facts which constitute a science. But even if it were allowed to be either useful or consistent with prevalent ideas, to spare the reader the trouble of referring every individual fact to the general principles on which it depends, it does not appear to us that M. Adelon has been successful in his endeavours. The example of Haller will serve to shew how such a task should be performed, and forms a standard with which few can be expected to bear a comparison. Even the size of M. Adelon's work would fail him in this respect; twice the number of volumes would not be too many to finish a treatise undertaken on the principles which he professes. As it is, his book cannot be considered in the light of an elementary treatise, by which we mean an exposition of principles, nor of a systematic one, by which is to be understood, in addition, the application of those principles to the whole range of facts in human physiology: it is too bulky for the one; too concise for the other. Independent of this, the author writes diffusely; when we expect to find him closely discussing some doubtful point, he wanders away from his subject in a string of well turned sentences, meaning little or nothing, with a style of

eloquence common to most of his countrymen, and familiar to those who are acquainted with the ordinary style of French works on physiology. This eloquence, and the facility of writing polished phrases to any extent, constitute the greatest part of the merits of the French writers in the present day, and are by no means destitute of a claim to approbation, but of themselves go but a little way to form a complete treatise; and in the absence of close reasoning, only serve to excite regret that so much ingenuity should be so needlessly wasted. We think it but justice to our own countrymen to avow these sentiments, at a period when a particular class of writers in this country are attempting to make themselves remarkable by holding up French medical literature as a model for general imitation on this side of the water. One reason for this line of conduct will often be found in the fact, that those who adopt it are ignorant of what actually has been done by their countrymen, and what by others; it is thus that we every day witness old facts and old ideas put forth to the world as novelties and matters of wonder. Other motives, not less powerful, may be found in the semblance of liberality and of freedom from prejudice, which such a line of conduct appears to present, and in the opportunity it affords of assuming a real or fancied superiority over those who are not so thoroughly convinced of the justice of such ideas. It is not, perhaps, a very easy thing to make a comparison between English and French medical writers, and we certainly do not intend to take upon us to pronounce to which the meed of excellence should be awarded; but of one thing we are certain, namely, that the comparison, as it is commonly made, and especially by the class of Gallomaniacs to whom we have already alluded, is manifestly unfair towards our countrymen—a point which, we conceive, it will not be very difficult to establish. In the first place, it should be recollected, that the number of French works which have acquired any celebrity among other nations, the surest test of real excellence, is but limited; and that notwithstanding our insular situation, and the long war which secluded us from the Continent, there is perhaps at least an equal number of English works in general repute and extensive circulation abroad. Be that as it may, we need only point out that it must be manifestly unjust to institute a comparison between the flower of French medical literature, with which alone we are generally acquainted, and with, we will not say an individual English work, but the whole mass of English medical publications. It should not be forgotten that a French work is never introduced to the notice of the profession in general, in this country, without some pretensions to merit,

derived either from the excellence of its execution, or from the previously established fame of the writer. Of the hosts of inferior works in France, and the facilities of publication there, increase their numbers to an incredible extent; nothing is known or heard in this country, whilst the corresponding works among ourselves are momentarily dragged from the oblivion which is their ultimate destination, by the notice of periodical writers. This brings us to the point which we wished to establish, viz. that the only fair comparison in this case, is that which should be made between the general mass of medical literature in both countries, or between any given number of books of superior excellence on either side. But having pointed out this fact, and having attempted to rescue our national credit on one subject from the imputations to which it is exposed by the imperfect information and the inconsiderate conduct of a small, but noisy party, we have not any wish to go farther: we are not conscious of possessing a sufficient share of impartiality to decide a question so likely to be influenced by national feeling, and more particularly as in so doing we should have the difficult task of pronouncing on the comparative merit attached, not only to the degree, but also to the kind, of excellence peculiar to each party. Happily too, the decision is not of importance; it is enough for us to advocate the just pretensions of our own countrymen, and to leave the field open for unrestrained competition on the part of others.

We have on several former occasions stated, that it does not constitute any part of our plan to enter into the close analysis of systematic works, especially of such as are not remarkable for containing novel or original ideas. The reasons which render such a task alike unnecessary and uninteresting scarcely require to be indicated. In the absence, therefore, of any thing which calls for animadversion or criticism in the work of M. Adelon, we shall take the opportunity of making one or two extracts from that part of it which contains some account of the experiments of MM. Dumas and Prevost on the subject of generation, and particularly of the spermatic animalculæ. On the changes which take place in the ovary after impregnation, these gentlemen remark that—

“ On the second day several of the vesicles are seen to increase in size, and continue to do so during the four or five days succeeding, so that from the size of two or three millimeters they reach that of eight; from the sixth to the eighth day the vesicles burst, and allow the escape of an ovulum from each, which is sometimes overlooked from being only half a millimeter in diameter, but which is readily discovered by the help of the microscope. The vesicle

from which the ovulum has escaped, presents a fissure on its external surface with bleeding edges, and leading to the cavity in which the ovulum was lodged. In the dog, on which animal their experiments were performed, the ovulum passes into the uterus about the eighth day; each ovulum passes through the fallopian tube in succession, and this occupies about three or four days. When they have reached the uterus they are at first loose and unattached; when examined with a microscope magnifying twelve times, each ovulum had the appearance of a small vesicle filled with a transparent albuminous fluid. When examined in water, their upper surface presented a tuberculated appearance, with a white spot on the side; this spot is the cicatricula. The ovula increase rapidly, and at about the twelfth day the fœtus could be recognized in them."—Vol. IV. p. 94, &c.

*Spermatic Animalculæ*.—After having made a rapid sketch of the discoveries of Haen and Lewenhoeck, M. Adelon proceeds to give an account of the results of experiment, instituted by MM. Dumas and Prevost.

"These physiologists not only confirm the fact of their existence, but also consider them as being direct agents in effecting fecundation. With the assistance of the microscope they have recognized them in the semen of every kind of animal which they have inspected. The result was the same whether the examination was of semen ejected during life, or taken after death from the vas differens, or body of the testicle. They consider the animalculæ as forming the specific character of semen, being deficient in the prostatic fluid, that of Cowper's glands, &c. In each species their form, manner of moving &c. are different, but are alike in all individuals of the same species. They are as perfect in the testicle itself, as at the moment of their excretion, and the assertion of Lewenhoeck, that they appeared of different ages is unfounded. They have a power of spontaneous motion which ceases after two or three hours in the semen when ejaculated, in fifteen or twenty minutes when the semen is taken after death, and in eighteen or twenty hours if it be left after death in the vessels, &c. In the human species, the semen does not contain any animalculæ before puberty, or in the latter periods of life, and in most birds they are only present at the period allowed by nature for impregnation. Their motions are rapid or languid, according as the animal from which the semen is taken happens to be young or old, ill or in health. In addition to these facts proving that the animalculæ are the agents of fecundation, MM. Dumas and Prevost are led to this conclusion; 1. By having remarked in mammiferous animals, that the animalculæ reach as far as the cornua of the uterus, and continue to live and move until the ovulum has descended; they are then gradually destroyed and disappear. 2. Because the animalculæ constitute the most remarkable portion of the thick part of the semen, on which alone they have proved that its fecundating

property depends. 3. Because the semen loses the power of producing impregnation after twenty hours, and within the same space of time the animalculæ cease to move, and perish. 4. In two experiments, MM. Dumas and Prevost, deprived the semen of its fecundating properties by the destruction of the animalculæ only. One of these experiments consisted in killing by means of repeated shocks from a Leyden jar, all the animalculæ contained in a portion of spermatic fluid, the fecundating power of which had been previously ascertained. In the other experiment, a portion of diluted semen was poured on a quintuple filtre repeatedly until all the animalculæ were retained by the filtre; in this case the filtered fluid was found no longer capable of affecting impregnation, whilst that upon the filtre still continued so. This last experiment had already been performed by Spallanzani, and with the same result. In the last place, MM. Dumas and Prevost, from what they have been able to discover of the first rudiments of the fœtus, conjecture that the spermatic animalculæ forms the nervous system of the new being, and that the ovulum furnishes nothing more than the cellular matrix in which the organs are formed. In order to obviate the objection drawn from the very small quantities of semen with which they and Spallanzani effected artificial impregnation, they have experimentally proved the extreme minuteness of the spermatic animalculæ; they mixed the contents of the vesiculæ seminales of a frog with ten grammes of water, and placing a drop of this fluid on a micrometer, divided into fractions of a millimetre, found that a cube of one fifth of a millimetre contained five or six animalculæ, and consequently, that there were from three to four hundred in one cubic millimetre of the fluid."—Vol. IV. pp. 118, 19, &c.

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ART. VIII. 1. *Prospetto Clinico dell' Istituto d' Ostetricia presso l' I. R. Università di Pavia, per l'anno scolastico 1822-23; compilato dal Dott. T. LOVATI, Assistente dello stesso Stabilimento.*

2. *Breve Censo interno l' I. e R. Ospizio della Maternità di Firenze, e conto reso della pratica Ostetricia in questo Stabilimento dall'epoca della sua fondazione fino al Marzo del 1824. Dell Dott. G. BIGESCHI, Medico e Professore nel prefato Ospizio, &c. &c.*

We have brought under one head these two papers on corresponding subjects, and shall give an abstract of the most important part of their contents, beginning with the account of the Institution of Pavia, by Dr. Lovati.

During the year there took place 67 deliveries, of which 45 were *natural and easy*, 12 *difficult*, and 10 *preternatural*. The 67 women produced 68 children, of whom 64 presented *naturally*, and 4 *preternaturally*. Of the 64 natural presentations, 61 were of the *head*, two of the *feet*, and one of the *nates*. Of 61 presentations of the head 36 were with the *occiput* to the *left acetabulum*; 24 with the *occiput* to the *right acetabulum*; and one with the *occiput* to the *left sacro-iliac symphysis*. Of the two foot presentations, the *heels* were turned towards the *right acetabulum* in one, and in the other towards the *left sacro-iliac symphysis*: in the single breech presentation, the *sacrum* was towards the *left acetabulum*. Of the four preternatural presentations, one was of the *face* with the *forehead* towards the *left acetabulum*; the other three were of the *upper extremity*, of which one was the *right arm* with the *head* towards the *left acetabulum*; the other two, a *right* and *left arm* respectively, the *head* in both being towards the *right acetabulum*.

In two of the cases of difficult labour, the cause lay in the dimensions of the pelvis, which in the one was smaller, and in the other larger than natural. The conjugate diameter of the former was 3 inches 5 lines, the oblique diameter 3 inches 9 lines; of the latter the conjugate diameter was 5 inches, the oblique 5½. These diameters were ascertained by using the pelvimeter of Baudelocque, with the usual allowance (3 inches) for the soft parts in the antero-posterior diameter, and the same instrument in the manner advised by Gardieu for the oblique diameters. The measures of the antero-posterior diameters corresponded exactly with those ascertained by the instrument of Coutouly. The pelvimeter commonly used on the Continent is that of Baudelocque; it may be described as a large pair of compasses applied with the point of one leg resting on the integuments of the sacrum, the other on the mons veneris, and with a graduated scale near their junction, marking the extent of their expansion. The instrument of Coutouly is more complicated, is applied within the vagina, and is generally considered as being less certain in its indications. Lastly, M. Gardieu was the first to extend the pelvimeter of Baudelocque, to the measurement of the oblique diameters of the pelvis.

In the case of contracted pelvis, labour came on early in the ninth month, and even then was attended with considerable difficulty. In the other case, the event was contrary to what the conformation of the pelvis rendered probable. The unusual size of the pelvis permitted the descent of the uterus; the more forcible the action of the body of the organ, the greater was the tendency to protrusion of the orifice; and it would probably

have prolapsed through the external parts, had it not been supported and pushed back by manual assistance.

Of 10 preternatural deliveries, 5 were manual, and 5 instrumental. In one of the former, the patient, aged thirty-five, and pregnant for the sixth time, had slight hæmorrhage in the beginning of the eighth month, which ceased for a time, but returned in greater quantity. She did not seek for assistance until the middle of the ninth month, when she was admitted into the Clinic. Examination proved the attachment of the placenta over the orifice of the uterus, as had been suspected. Attempts to moderate the hæmorrhage by *venesection*, rest, cold applications, &c. failed, and the blood continued to escape freely. This was still farther increased by the commencement of uterine action, and the dilatation of the os uteri. The left hand was consequently introduced into the uterus, the child's feet grasped and brought down. It was born in a state of asphyxia, but recovered by the application of the usual measures. The placenta was soon expelled, the hæmorrhage ceased, and did not return. Though much weakened, the patient quickly recovered, and left the Clinic in twenty days.

In another case of preternatural delivery, pains had begun on February 6th; on the 7th the liquor amnii escaped, and from that time until the morning of the 8th, when the patient was first seen, the pains had continued, but without much effect. This was the 13th time she had been pregnant. Eight of her deliveries had been fortunate; in the commencement of the ninth pregnancy, she first began to suffer deep-seated pains in the bones, succeeded by distortion, which gradually increasing, had rendered each succeeding delivery more difficult. In the last nine months the disease had made rapid progress. By external examination the uterus could be felt closely contracted on the child, the motions of which were distinct; the spines of the ilia were approximated; the sacrum depressed; the pubes prominent; the inguinal regions, particularly the right, sunken; internally the arch of the pubes was much contracted, the tuberosities of the ischia pressed inward, the coccyx immoveable, and projecting into the pelvis. The patient was taken into the Clinic, and again examined by Professor Bongiovanni, who, judging from the contraction of the inferior aperture, decided on the Cæsarean operation. The pelvimeter of Baudelocque gave, after the usual allowance for the soft parts, 4 inches for the conjugate, and  $3\frac{1}{2}$  for the oblique diameters of the upper aperture of the pelvis. Notwithstanding the contraction was evidently greater, owing to the projection of the pubes, and the depression of the groins. We do not think it necessary to de-



scribe the operation, which was performed on the same day. The most alarming symptoms were vomiting, hiccup and cough, which however were much diminished on the following (Feb. 9.). Natural discharge took place from the uterus, bladder, and bowels, and a little serum escaped from the lower angle of the wound. The symptoms became worse on the 10th; the vomiting returned, with pain, thirst, fever, &c. They increased during the 11th and 12th. On the 14th, stertor appeared, with the loss of speech and convulsions; and in the evening the patient died.

After death the lips of the wound were found in contact and adhering, not to each other, but to the subjacent omentum and a loop of intestine. The peritoneum lining the abdominal muscles was every where inflamed, the intestines distended with gas, and glued together by adhesions. The uterus was as large as the head of a full grown foetus; the wound in it not vertical but oblique from left to right. It was in a healthy state, as were the remaining viscera. The soft parts being removed, the sacrum, the tuberosities of the ischia, and the horizontal portions of the ossa pubis projected inwards, so as materially to diminish the size of the pelvis. The height of the patient was  $4\frac{1}{2}$  feet. The distance between the two anterior superior spines of the ossa ilii,  $7\frac{1}{2}$  inches; from the crista of the ilium to the same part on the opposite side, 9 inches 9 lines; from the crista of the ilium to the tuberosity of the ischium, on the right side, 7 inches, on the left side, 7 one-sixth inches; from the symphysis pubis to the promontory of the sacrum,  $3\frac{1}{4}$  inches; from the linea ilio-pectinea to the promontory, on the right side, 1 inch 11 lines; on the left, 2 inches 5 lines; from the one linea ilio-pectinea to the other, 1 one-sixth inch; from the right acetabulum to the left sacro-iliac symphysis,  $3\frac{1}{2}$  inches; the corresponding diameter, 4 inches; from the upper part of the arch of the pubes to the coccyx,  $2\frac{1}{2}$  inches; from the tuberosity of one ischium to that of the other,  $1\frac{1}{2}$  inch; from the coccyx to the tuberosities of the ischia, 1 inch 7 lines; the depth of the hollow of the sacrum was 2 inches 5 lines.

In another case also, the Cæsarean operation was performed; the patient was affected with rachitis, and distorted in every part of the body. Her height was only 3 feet  $3\frac{1}{2}$  inches; the pelvimeter of Baudelocque indicated 1 inch 9 lines for the conjugate diameter; 2 inches 9 lines for the left, and 2 inches 5 lines for the right oblique diameters: these measurements were confirmed by internal examination. The distance from the pubes to the ribs was not above four or five fingers' breadth, and consequently the uterus projected from the abdomen, so much so in

fact, as to reach nearly to the knees. Labour pains began May 16th. They were allowed to continue through the day and night, so as to ensure a sufficient dilatation of the os uteri for the escape of discharges. At seven in the morning of the 17th, the operation was performed in the usual manner without any accident; the child was extracted alive and strong. Immediately after the operation, vomiting and hiccup came on, then ceased for a time, but returned with increased violence during the night. The bowels were emptied by clysters, and the lochia flowed freely. In the morning, besides the former symptoms, there was great tension of the abdomen, with fixed pains at the lower angle of the wound. It was opened, and a loop of intestine found strangulated between its edges. The replacement of this did not relieve the symptoms. The vomiting, hiccup, and tension continued, with cold extremities, small pulse, convulsions, &c., and the patient died at seven in the evening of the 18th. The appearances on dissection were the same as in the former case, with this addition, that above half an ounce of blood was extravasated in the left iliac fossa. The dimensions of the pelvis corresponded exactly with those obtained by the pelvimeter of Baudelocque. Dr. Lovati concludes some remarks on the danger necessarily attending such operations by stating, that he is inclined to coincide with the opinion expressed by some of his teachers, that many of the cases in which it is said to have been performed, or even repeated, with success, are either false, or instances in which it was done without necessity in well formed patients.

The forceps were applied in one case in which the pains had failed in expelling the head, which had descended into the hollow of the sacrum, but without performing the usual motion of rotation, whence doubtless arose the difficulty. The child was dead, but the mother recovered perfectly. They were employed in another case, in which the head presented with the occiput to the left sacro-iliac symphysis, and in which the oblique diameters of the pelvis were about half an inch deficient. The pains after having continued for two days ceased, thus rendering the operation necessary. The child was in a state of asphyxia, but recovered by the loss of a little blood from the funis.

In three arm presentations the child was turned, following the rule given by Professor Bongiovanni in such cases, viz. to introduce the hand corresponding to the situation of the feet of the child, the right if they are on the left side, and *vice versa*. In one of these cases the patient entered the Institution a day after the commencement of labour, and many hours after the

waters had escaped; the right arm, together with the funis, had descended into the vagina; the conjugate and both oblique diameters were severally  $3\frac{1}{2}$  inches. The child was first turned, and the feet with the body brought down as far as possible. When the head came to the contracted part of the superior aperture of the pelvis, its further descent was resisted by the angle of the lower jaw, resting, one on the promontory of the sacrum, the other on the symphysis pubis; recourse was then had to the forceps, of which one blade was introduced behind the right acetabulum, and the other in front of the left sacro-iliac symphysis. The head was thus compressed, brought down, and extracted; the child died, but the mother had a favourable recovery: the event of the operation was not more favourable to the child in the other two cases of arm presentation, of which another also was complicated with descent of the funis.

In the instance in which the face presented, it was found immediately on the admission of the patient, and twelve hours after the rupture of the membranes, that the vertex was turned to the left acetabulum, the chin to the right sacro-iliac symphysis, and the forehead in the centre of the pelvis. This presentation Dr. Lovati considers as being secondary to the ordinary one of the vertex, because of the diagonal situation of the head, which he states to be transverse in primary face presentations. He explains this secondary presentation by supposing that the occiput, resting in contact with the horizontal ramus of the pubes, does not descend from some accidental cause in the same proportion as the other parts of the head; consequently the chin is raised from the sternum, and pushed down at the back part of the pelvis, so as to place the forehead in the centre of its superior aperture. Attempts to push back the forehead, and bring down the vertex failed, both with the hand and lever. The forceps, which were introduced with great difficulty, were not more successful, and the delivery of the child, which was dead, was at last effected by turning.

The patient, in the last case of artificial delivery, was strong and healthy, aged thirty-five, and pregnant for the second time. Labour commenced on Sept. 29th, continued slowly through the 30th; and on the evening of that day, the os uteri was found not larger than a franc piece. The pains increased, and at two on the following morning the waters escaped. The head was found presenting with the occiput to the right acetabulum; its size was considerable, which, together with a deficiency of about seven lines in the conjugate diameter of the pelvis, gave cause to expect a tedious labour. The pains continued, vigorous until about seven in the morning, when they became

languid and soon ceased. The vertex was swelled, and protruded a little at the os externum, but the bulk of the head was still high.

Whilst the necessary preparations were making previous to the application of the forceps, the patient, in the midst of forcible but voluntary efforts at expulsion, screamed out in consequence of acute and sudden pain above the symphysis of the pubes, with a distinct sound of laceration. This accident was succeeded by anxiety and vomiting, without any hæmorrhage, syncope, convulsion, cold sweat, weakness of the pulse, or change in the shape of the belly. The os uteri remained dilated, and the patient did not feel any sense of internal effusion. The forceps were at once applied, and the child extracted alive, but moribund. The placenta was retained, and the hand, passed into the uterus, discovered a laceration at its antero-inferior part. The spontaneous separation of the placenta was succeeded by considerable hæmorrhage, which was stopped by cold applications, &c.; it did not return during the following day and night, but the patient complained of very severe pain in the abdomen, with small, quick pulse. It was thought proper to bleed her. On the following morning a considerable hæmorrhage took place, which was checked, but occasionally returned: the pain in the abdomen continued to increase; the skin covering it felt burning hot; vomiting appeared with cold sweats, &c., soon followed by death. On examination, the peritoneum was found injected and inflamed throughout; it was torn at the point of laceration in the uterus, and contained about two pints of fluid, apparently the liquor amnii. The rupture of the uterus was transverse, four inches long, and seated a little above the point of connection of the vagina with the os tincæ: the organ was here a little thinner than elsewhere, but otherwise healthy. The conjugate diameter of the superior aperture of the pelvis was only 3 inches 5 lines, as had already been indicated by the pelvimeter of Baudelocque. The oblique diameters were natural.

Of the sixty-seven women admitted into the Institution, thirteen had premature labours: in one case the period of gestation appeared to be a fortnight longer than natural: the fact was supported alike by the assertion of the patient, by the period of quickening, the development of the child, its weight, its size, and the test of Chaussier founded on the comparison of the distance from the insertion of the funis to the head and feet respectively.

Of the premature births, two were in the seventh, the rest in the eighth month. In both the former, and in three of the latter there was diminution in the size of the pelvis. Of these five cases, the greatest conjugate diameter of the superior aper-

ture of the pelvis was 3 inches 9 lines, and the least 3 inches 4 lines; the greatest oblique diameter among them was 4 inches 3 lines, and the least 3 inches 9 lines. In all five, had they gone to the full time, the use of the forceps, if not of other measures, would have been necessary; and it is remarkable that labour came on in the seventh month, precisely in the two cases in which the diminution of the size of the pelvis was most considerable. Professor Bongiovanni appeals to such cases, as proofs of the frequency with which nature anticipated the danger attendant on such distortion, but it is needless to say that practice furnishes a sufficient number of cases to prove that this is far from being a general occurrence.

Of sixty-eight children, two were born dead, four in a state of syncope, ten apoplectic, (asphyxiated &c) one with a distorted hand, and fifty-one alive and healthy. Of two children born dead, one was from the compression of the funis, which descended with the arm, the other from laborious parturition with presentation of the face. Of the four affected with syncope, two were completely restored, and two died after having given signs of life. Of ten apoplectic, also, two died; so that the total number was six dead out of sixty-eight. Of the whole number thirty-nine were male, and twenty-nine female. The greatest weight among those born at the full time was 14 pounds 6 ounces; the least 5 pounds; the greatest length was 21 inches; the least 15½ inches.

Thirteen patients were ill after delivery, and all seriously so; four were cases of gastric fever; five hysteritis, with peritonitis; one ascites, with anasarca; and three puerperal fever. The gastric cases were cured by purgatives, neutral salts, and bitters. Two of the cases of hysteritis were quickly cured by venesection, purgatives, and calomel, with hyoscyamus. The three others, which were the consequence of the Cæsarean operation, and of laceration of the uterus, terminated fatally, in spite of active treatment. The ascites with anasarca was removed by saline purgatives. In the cases of puerperal fever the professor adopts the views and the treatment of Drs. Campbell and Mackintosh, with the addition of calomel, as recommended by M. Vandenzande: one only, out of three, however recovered. In the two fatal cases examination shewed the usual effusion of serum and lymph, inflammation of the peritoneum and enlargement of the uterus.

Dr. Bigeschi's report of the hospital at Florence, commences with an account of the plan of study pursued by the female pupils, for whose education it was originally founded; of these studies it is enough to say that they are almost precisely similar

to those of the Lying-in hospital, at Paris, for an account of which we refer to the *Journal of Foreign Medicine*, Vol. III., p. 314.

From the opening of the Institution, in June, 1816, until the end of March, 1823, 500 women produced 506 children; of these 485 presented with the head, viz. 399 with the occiput to the left acetabulum, 86 with the occiput to the right acetabulum, and one with the occiput to the left sacro-iliac symphysis. We are not certain of having stated these presentations correctly. Foreigners are in the habit of designating presentations as first, second, &c., instead of designating their nature; but as they are not universally agreed what shall be first, second, and so on, there is room for much confusion. Dr. Bigeschi has referred to a manual of his own for his arrangement of the presentations, but not being acquainted with it we have followed that of Baudelocque, as being the most generally adopted on the Continent, and have rendered the terms first, second, and fourth position accordingly.

There were six presentations of the feet, viz. five with the heels to the left acetabulum, and one with the heels to the left sacro-iliac symphysis. The face presented once with the forehead to the right acetabulum, and caused a tedious difficult labour. In three cases the right arm presented, viz. once with the head to the left acetabulum, and twice with the head to the right acetabulum. In another case, the left arm presented with the head towards the right acetabulum. In two cases of twins, both at the 7th month, the presentation was not detected, they being expelled suddenly, enveloped in the membranes. The number of males was two hundred and seventy-nine, of females two hundred and twenty-seven. The number of premature labours was twenty-one. The largest child weighed 16lb 4oz.; the least, at full time, 5lb. The average weight was 10 Tuscan pounds (each 12 oz.). The placenta in one case weighed 4½lbs; its common weight was one pound and a few ounces. In one case the liquor amnii amounted to 8lbs; commonly it was between 1 and 2. The greatest length of any child was 20 inches, the least, at full time, 15 inches; the common length was from 17 to 18.

Of 506 children, 49 died; of these 13 were either born dead or before the full time; 6 died of convulsions within eight days after birth; five of induration of the cellular tissue; two of inflammation of the intestines; three of asphyxia; four of debility; and one from such an extensive fissure of the upper lip and palate as to prevent it from swallowing. In the children born before the expiration of the full period of gestation, the distance

between the insertion of the umbilical cord and the top of the head was always found greater than between the same point and the extremity of the feet, so that Dr. Bigeschi places full confidence in this test proposed by Chaussier for verifying the immaturity of the foetus. Dr. Bigeschi paid particular attention to the cases of the induration of the cellular tissue, a disease which was common in the establishment, and still more so in the Foundling hospital, but confesses his ignorance of its causes. He has seen it occur in strong children born of healthy parents, and principally when the weather was severe, but never in summer. He was induced, therefore, to allow the children to be placed in the same bed with the mother, with strict injunction that they should be kept warm. From that time no case of the disease has occurred. The same practice has been found useful by Professor Vacca, in the Foundling hospital at Pisa.

In two cases in which the superior aperture of the pelvis was about an inch deficient, an attempt was made to apply the forceps above the brim, but without success. Turning was therefore had recourse to, but in one of the cases there was considerable difficulty in extracting the head through the superior aperture, even with the aid of the forceps when the body had been expelled. The child and mother both died; the latter from inflammation of the peritoneum and uterus, the cervix of which was found to have been bruised by the blades of the forceps and the head of the child. In the other case, the head was extracted without the forceps, but the child was dead. The mother was attacked on the following day with fever and acute pain in the left lumbar region. In spite of active treatment the symptoms continued, and she died on the 17th day. The left kidney, the spleen, a part of the diaphragm, and the lower lobe of the left lung were all found in a state of suppuration. The uterus was healthy, except in having a small collection of matter in its left ligamentum latum.

Turning was performed in one case in consequence of the attachment of the placenta to the uterus. The child was dead, and the mother died within an hour after the operation, which answered the object intended: the quantity of blood lost is stated not to have been excessive. In another case turning was performed with perfect success to both child and mother, in consequence of the protrusion of the funis. The same operation was performed in four arm presentations; the children all lived; one of the mothers died of peritoneal inflammation. Two labours were followed by depression, and one by incomplete inversion of the uterus. In one of these it arose from want of caution in

removing the child when the funis was short. The uterus was at once replaced, and all the cases did well.

Six cases were succeeded by hæmorrhage, which were successfully treated by cold, the introduction of the hand when there was complete inertia of the uterus, and external compression by a swathe. Puerperal fever or peritonitis occurred twice, and was successfully treated by vigorous antiphlogistic measures. The same treatment had the same results in two cases of pneumonia. There was one case of inflammation of the urethra and neck of the bladder, and one of separation of the symphysis pubis. The first recovered under the use of leeches, fomentations, &c.: the second was restored in a FORTNIGHT by rest and a bandage round the pelvis. Some slight cases of gastric fever, arising from improper food, mental anxiety, &c., were easily cured by emetics and cathartics. The frequency of the occurrence of milk fever was diminished by allowing a more nutritious diet to the patients than was customary. The same fact was observed by Drs. Bertini and Lazzerini.

Dr. Bigeschi has continued to use the *secale cornutum*, and with the utmost success, excepting two cases in which it did not produce any sensible effect. That collected in Tuscany he found to possess the same qualities as what he had obtained from Paris. He considers it as the most certain and safe way of assisting nature, when employed in proper circumstances. It does not produce any lasting effect in the first or second stages of labour; nor will it restore the uterine action if it has altogether ceased.

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ART. IX. *Pathological Observations*. By WILLIAM STOKER, M.D., Licentiate of the King and Queen's College of Physicians, in Ireland. Part I. *On Dropsy, Purpura, and the Influenza of the latter end of the year 1822, and beginning of that of 1823; and particularly on the Morbid Changes of the Blood, and their Influence on the Production and Course of these Diseases*. Illustrated by Select Cases and Dissections. pp. 235. Dublin, 1823.

Dr. Stoker's very full title page gives such an explanation of the nature and object of his work, that it is unnecessary for us to say any thing on that topic. It has for some time been easy to remark, that the fashion of the day, for there is a fashion even in medicine, has been a recurrence, or an affected one, to



the principles of the humoral pathology. Hints have been thrown out that these have been too hastily rejected, and that they are absolutely necessary to complete the theoretical, and to assist the practical parts of medicine. While the matter remained in this state, it required no notice; but it now assumes a different aspect. Dr. Stoker has been at the pains of collecting cases, and making observations in support of the views he has adopted, which are decidedly favourable to the opinions of those who believe that diseases originate in altered conditions of the animal fluids.

"Impressed," says he, "with an opinion that many diseases, especially those included in the preceding title page, depend on changes which take place primarily in the fluids, as others do in the solids, I have been led to prepare the following work, the object of which is to exhibit some of those facts, collected during an extensive experience for twenty-five years, on which that opinion is founded; and I indulge a hope, that by directing a more minute and general attention to the state of the blood, and of the fluids derived from it, both in health and disease, than has of late been bestowed upon it by medical observers, I shall promote the science of medicine, and further the improvement of the arts of healing."—*Préface*.

After some preliminary observations, Dr. Stoker states that the sources "whence the blood acquires the means of its fluidity, and of restoring the losses sustained in circulation," are two; first, the chyle and lymph which enter the subclavian vein; and second, the contents of the hepatic veins, which carry back to the heart blood which has already passed once, at least, through both the lesser and greater circulation:—

"It has always been my opinion, that the chief use of the liver and spleen was to effect an important preparation in the highly rich and dense venous blood which passes through those organs, and essentially necessary to fit it for the elaboration of arterial blood in the lungs, and for the vital purposes of the greater circulation."

"Experiments, which I instituted more than twenty years ago, with a view to ascertain what was the difference between the state of the blood in the vena portæ, and of that as it enters the vena cava ascendens from the liver, though rude and incomplete, yet appeared to me to be at least decisive, that in health blood is of lighter colour after than before its passage through the liver; and further, that on immersing blood of these different denominations, in separate vessels of water at a high temperature, there was a remarkable portion of solid animal matter elevated to the surface of the water in which the blood of the vena cava was immersed, whilst no such appearance presented itself on the water in the other vessel."—pp. 8, 9, 10.

Dr. Stoker divides purpura and dropsy into two distinct forms, to which he has given the names of *Dynamic* and *Ady-*

namic, terms which appear to be nearly equivalent to the more common ones Active and Passive, at least as he applies them. He then proceeds to relate two cases of dynamic, dropsy, and purpura combined. Their extreme length absolutely prevents us from transcribing them; and we shall therefore only notice the account he gives of what strikes him as being the true *ratio symptomatum*.

"The exciting causes appear to have been the same in both cases, namely, morbid collection in the mesenteric, hepatic, and hæmorrhoidal vessels, the periodical discharge of which (from the rectum) had frequently given relief in the last case, and with its total suppression, the symptoms of dropsy and purpura commenced."

"There was a remarkable similarity in the symptoms also, for oppression and pain preceded the dropsical and purpural effusions in both cases, and these indications of partial or of general plethora were relieved, though not in the same degree by bleeding." pp. 28-9.

"Morbid accumulation in the hepatic, mesenteric, and hæmorrhoidal vessels, having been common to both these cases in their commencement, it has been assumed as the connecting cause of the succeeding symptoms. That such accumulation, as well as the morbid appearances of the blood [density and a buffy coat, &c.], which it presents soon after being drawn, in the course of these and similar diseases, arise from imperfect or irregular sanguification, appears, I think, probable, from consideration of the two chief sources of supply to the sanguiferous system, and the similarity of the fluid in its colour and properties at these sources, and previously to its being submitted to the action of the lungs or liver, to the buffy coat, that substance observed on the surface of blood drawn in certain diseases having been so called; an opinion which I have been farther induced to think well founded, from the results of a considerable number of observations lately made at my request on blood, shortly after it was taken from persons labouring under various forms of disease, nearly under the same circumstances."—pp. 32, 33.

"The general oppression and severe articular pains which both patients suffered in the commencement of their complaint, and the dyspnoea and oppressed pulse which succeeded, may be fairly attributed to the excessive degree of plethora. The purpura and œdema, however, in these cases, seem to have been produced not only by that increase in the quantity of blood, but also by a change in its properties, the distension of the extreme vessels, so as to admit of the dense and coloured part of the blood being facilitated, particularly in the second case, by the debilitating effects of intensely cold winds."—"The cessation of the pulse (in the second case,) for a short time over the whole system, and in one side for nearly two days, not being accompanied, as in ordinary syncope, with the loss of power in the voluntary muscles, can only be referred, in my opinion to a morbid condition of the blood."—pp. 33, 34.

"The post mortem examination, which was made in the second case, discovered no disorganization which could account for the symptoms detailed in its history, and one appearance alone was presented, which could be fairly considered to give a satisfactory explanation of the cause and sudden manner of dissolution; that was the firm buffy coagulum found in the right ventricle of the heart, which was proved in this instance by many striking circumstances to have formed before death, and also seemed to be a sufficient cause, and therefore to afford a satisfactory explanation of the manner in which that event took place."—pp. 34, 53.

Dr. Stoker grounds the supposition that this polypus concretion was formed during life; on the early period (five hours) after death, at which the dissection was made; on the fact that the blood drawn in the course of the disease coagulated, and became sizzly at the same moment, and almost immediately after it flowed into the cups which received it, which shew both its tendency to become solid, and that its sizzly surface did not depend on slow coagulation; on the temporary cessation of the pulse, without any loss of general muscular power, which he conceives marks still farther the strong cohesive tendency of the blood, even whilst it still circulated in the sanguiferous system; and lastly, on the circumstance that from the unusually short time after death at which the examination was made, the blood was found fluid in every other vessel cut into, and neither the serum nor red blood, which must have separated from the coagulum during its formation in the right ventricle and pulmonary arteries, were to be found there, and which could have been propelled into other vessels only by vital power.

That the cases Dr. Stoker has related, and the conclusions he has drawn from them are of considerable importance we admit, but we do not think he has by any means succeeded in establishing his own interpretation of them. Of the share which the condition of the fluids may have in the production of disease we do not at present intend to speak, but after the above case we are bound to say that to us it does not present any adequate cause for supposing that the formation of the concretion took place during life. With the exception of dyspnoea we have not discovered any symptom that could be supposed to be dependent on this production or on the obstruction which it must naturally present to the circulation through the lungs, and through the system at large. On the contrary, we find it stated that the pulse was to the last full and firm, a state rather inconsistent with such a complication. The patient too, died rather suddenly and in convulsion, a circumstance which gives room for regretting that the head was not examined. Nor are we more disposed to grant the temporary cessation of the pulse

in the commencement of the disease, is any evidence of what the author calls "the strong cohesive tendency of the blood," an idea which, setting its pathological bearings out of the question, is refuted by the best established principles of physiology.

The next part of the work consists in observations on the connexion supposed to exist between the appearance of the buffy coat on blood, and the time required for its coagulation. It is well known that pathologists, in general, have looked upon this as a merely physical operation, and have explained it by the slow coagulation of the blood in the cases in which it presents itself, and by the time thus allowed for the precipitation of the red globules. Dr. Stoker rejects this explanation, as being incapable of being reconciled with the results of actual observation. He has given a tabular view of the state of the blood drawn from twenty-seven patients, the time required for its coagulation, with notices of the presence or absence of the buffy coat, &c. We do not think it necessary to transcribe this, but shall contrast one or two of the cases which appear to fully support the doctrine Dr. Stoker has advanced. In the second case, 3x. of blood were forty minutes before they began to coagulate, and an hour before coagulation was complete; there was not any buffy coat; the complaint was pain in the chest, cough, and pyrexia; the pulse 96 and hard. In the eighteenth case, 3vii. of blood taken from a patient suffering from hoarseness and stitches, the consequence of influenza, began to coagulate in seven minutes, were not completely coagulated for four hours, but did not present any buffy coat. On the other hand, in the seventeenth case, 3xij. of blood, taken for the relief of combined pneumonia and hepatitis, began to coagulate in three minutes, were completely coagulated in ten minutes, were cupped, and presented a cream coloured buffy coat. In the twenty-fourth case too, 3x. of blood, taken for the cure of pneumonia, began to coagulate in four minutes, were coagulated in another minute, were cupped, and presented a light coloured buffy coat. The cases we have quoted, which are among the most marked, will serve to shew that there is not any direct relation between the appearance of the buffy coat and the time required for the coagulation of the blood. We believe that Dr. Stoker is not the first who has questioned the existence of such a relation, but undoubtedly, he has the merit of having experimentally disproved it. We ourselves had long ago been led to similar results, though not so unequivocal, by the consideration of the appearances of the coagulum of blood having the buffy coat. It will be seen by a moment's reflection that if the latter were the product

of slow coagulation it ought always to take place to a greater or less degree, and that the red globules should be found dispersed through a vertical section of the coagulum in unequal quantities, being most abundant at the lowest part and gradually decreasing towards the surface. If such a section, however, be examined, no such appearance presents itself, and on the contrary the buffy coat does not contain any sensible quantity of red globules, whilst the transition from it to the red coagulum is not gradual, but sudden and defined; the distance from the surface at which it takes place varying according to the thickness of the layer of fibrine.

The occurrence of the buffy coat is attributed by Dr. Stoker, either to a want of due preparation of the fluids at the two chief sources of supply, and of the subsequent changes these fluids should undergo in their passage through the pulmonary, sanguiferous, and hepatic systems, or to the injurious effects of diseased functions in the organs of sanguification. He goes on to say—

“The colour and external characters which designate various kinds of buffy coat, being also found to indicate the particular functions engaged in producing them, afford additional arguments in favour of the foregoing opinions. In simple pneumonia, for example, as appears from inspection of the table, the coat on the blood is generally of a colourless white; but when tinged, it is with bright red, the depth of the tunic seldom exceeding a few lines, and to this probably it is owing that the cupping on the surface of such blood is generally remarkable; the thin and tenacious film contracting as it forms, and drawing towards the centre the external margin of the less contractile crassamentum.”

“In simple forms of hepatic disease, on the contrary, the buffy covering is generally darker through its whole substance than in pneumonia, and is externally yellow. It occupies a large proportion of the solid part of the blood, and is not often cupped; when it is cupped, there is reason to suppose that the lungs are partly engaged.”

“In diabetic complaints, which there is so much reason to believe originate in imperfect digestion, or insufficient preparation of chyle, it is well known that when blood is drawn it is often found covered over with a whitish milk-like fluid.”—pp. 39-40.

We regret exceedingly, that the extreme length and minuteness of the reports of cases of dropsy and purpura, both dynamic and adynamic, which constitute the bulk of the treatise, should render it impossible for us to lay any of them before our readers except that which follows, reported by Dr. Osborne in a more concise manner. It is given as a case of adynamic purpura. Many will, perhaps, be inclined to doubt the propriety

of the appellation, and it is to be observed, that Dr. Stoker has not laid down any certain distinctive characters between the dynamic and adynamic forms, either of dropsy or of purpura. His classification of them appears to us to be in a great measure arbitrary, and we find ourselves very much inclined to question the reality of the distinction between them, when we remark that blood-letting, certainly no cure for debility, according to old fashioned notions, was found to be serviceable in adynamic cases.

Case. Nov. 19, T. Barry, aged thirteen. The skin sprinkled over with numerous small maculæ of the colour of port wine, accompanied by a constant hæmorrhage from his gums, and a soreness in his throat. Pulse, 132, weak; bowels natural. The hæmorrhage has lasted more or less during the last week, and was thought to be the effect of a fall. The maculæ were not observed until yesterday.

20th.—Apl. inter scapulas ves. R. acid. sulph. dilut. tinct. digit. aa ʒj.; syr. simp. ʒvj.; aq. cinnam. ʒij.; mucil. gum. arab. ʒij.; m. sumat. ʒss.; quater in die.

21st.—Maculæ of a brighter colour; pulse, 124. He is reported to have had two fainting fits: no dejection.

R. Olei ricini, ʒss.; tinct. sennæ, ʒij. statim.; cont. mist. acid; cap. pul. ipecacuanhæ, gr. ij.

22d.—Maculæ same as before; an offensive odour is perceived about him; respiration impeded, and accompanied by a hoarse cough. R. Muc. gum. arab. ʒiv.; aq. menth. pip. ʒj.; vin. ipecac. ʒij.; syrup, ʒvj.; m. sumat. ʒss. tertia, q.q. horâ. Haust: efferves. quater in die; omit. cætera.

23d.—Hæmorrhage rather diminished. Died this morning at five o'clock, without any violent symptoms.

*Dissection.*—On examining the spots on the skin, they were found to be produced by blood poured into the substance of the cutis, and not effused on its surface, or under the cuticle, as has been supposed. Spots, precisely resembling in appearance and mode of formation were found on the pleura, the substance of the lungs, the pericardium, the surfaces and interior of the muscular substance of the heart, in the abdominal muscles, diaphragm, and all the muscles that were cut through in the course of the dissection, in the peritoneum, the substance of every part of the alimentary canal, and on its internal surface. Very few spots were found in the liver, kidneys, or spleen; and the latter organ was rather more firm than usual, and slightly enlarged, but its texture and colour perfectly natural. The bladder of urine had suffered most from the disease, the blood having been effused so largely into its substance that the internal tunic was elevated

into a number of regular dark coloured folds, which were so prominent as to materially diminish the cavity of the bladder. Some liquid blood was also found in it. With the exception of the above mentioned appearances the viscera were perfectly healthy. A very few spots were seen in the integuments of the cranium and dura mater, but none in the substance of the brain. The blood throughout the body was remarkably fluid; and in place of any fulness, either of the venous or arterial system, there appeared to be rather a deficiency of the circulating fluid.

On this case Dr. Stoker remarks,—

“ That it appears to afford an excellent epitome of many of the most remarkable circumstances detailed in those which preceded it; such, for example, as the situation of the purpura in the integuments, their general diffusion over unconnected parts, and the total absence of organic derangement, beyond that produced by the infarction of the blood, arising out of vascular debility, or suspended function of the part.” “ Viewed too, in contrast with dynamic purpura, it exhibits more clearly how much such forms depend on a dissolved state of the blood, as well as relaxation of the vessels, allowing of its transmission through minute exhalants, which were in health permeable only to colourless fluids.”—pp. 147-8.

Dr. Stoker next proceeds to discuss the treatment of dropsy and purpura, which he does under the separate heads of prevention and cure. He considers that the different nature of dropsies suggests very important considerations in directing means of prevention, and illustrates this idea by a reference to two cases.

“ In the first, the diabetic overflow which led to the hydropic effusion appeared to be directly connected with the condition of the supply from the lacteal and lymphatic system, and by remedying the obstruction given by inflammation to the previously increased aqueous secretion by the kidneys, the dropsical effusion was removed: afterwards, by limiting the quantity of drink, and treating the disease according to Dr. Rollo's plan, the return of the dropsy was prevented, and the diabetes itself ultimately cured. In such cases, which might for the sake of distinction be denominated diabetic or chylous dropsy, the limitation of the quantity of drink, and the means of restoring a healthy condition of the chyle, appear to me to demand the first care in the preventive, as well as perhaps in the curative treatment also.”—pp. 151-2.

“ On the other hand, in such cases as the second, and which may be called hepatic or melænous, in which the dropsy was evidently connected with intestinal and hepatic derangement, and its removal, with the restoration of the functions of those organs by the separation of what appeared in the dark alvine discharges, prevention or cure might be promoted rather than retarded by free dilution, especially if the fluid consumed by the patient should contain articles of a detergent and aperient quality.” p. 153.

"It is not merely, however, to the limitation of excess in the use of either solids or fluids, to which those disposed to dropsy and its ancillary state, obesity, are inclined, that prevention should extend; they should also be warned against the habit of eating fast, induced by a keen appetite and a weakened stomach, often the first symptoms of approaching dropsy."

"By indulgence in the morbid habit of swallowing food without sufficient mastication and due admixture of saliva with it, I have known those diseases of digestion, on which dropsy and purpura so frequently depend, to proceed to an incurable degree; but on the other hand, on succeeding in convincing the patient of the vital necessity of resisting this pernicious habit, not always an easy task, I have often had the satisfaction of witnessing the most beneficial consequences."—p. 154.

"The first stage of leucophlegmatic dropsy, may, I believe, be very generally traced to some morbid change in digestion, and from it, the train of causes which disturb the animal economy may follow; the chyle not being duly prepared, so as to be convertible into healthy blood by the sanguifying processes of the lesser and greater circulations, the action of the secreting organs must be rather disturbed than promoted."

In laying down the cure of dropsy and purpura, Dr. Stoker commences with the consideration of blood-letting. In this place too, he gives a fuller exposition than he had before done of the sense in which he employs the terms dynamic and adynamic.

"There can be no question," says the author, "among the experienced, that two states of these diseases (dropsy and purpura) exist: the one connected with muscular power in general, and vascular power in particular, by which the denser parts of the blood, whether colourless or red, are either forced into the minute vessels previously impervious to them, or these extravasated; the other attended with debility, both general and vascular, during which, serum or coloured blood accumulates in the exhalent vessels, or is poured out in morbid excess by them into the cellular substance, where it collects from the absorbents, participating in the general debility. In the former state blood-letting, when cautiously applied, is highly beneficial; in the latter, it is as generally injurious."

The indications of blood-letting in dropsy and purpura are, according to Dr. Stoker, strength of the patient not materially diminished, increased vascular action evinced by strong pulse and increased temperature, relief of oppression, and of pain, immediately after the operation; and the subsidence afterwards, though not for a few hours perhaps, of the dropsical swellings. He thinks, also, that considerable caution should be observed in the manner of taking blood, and that it might be advisable



either to abstract it very slowly from a vein, or by cupping or leeches, rather than to risk what he calls a remora and coagulation of a part of the sily mass in some large blood-vessel, or in the heart itself. In this part of the work, Dr. Stoker has not touched upon the subject of blood-letting, in cases of his so-called adynamic dropsy and purpura. The reason of this, we do not know how to explain; but it is sufficiently remarkable, as in all the cases of adynamic dropsy which he has related, four in number, it was employed either locally or generally, or both, and with evident advantage, though not always with ultimate success. We cannot avoid considering this circumstance as one materially tending to confirm the opinion we have already expressed; that he has not offered any sufficient grounds for thus separating the cases he witnessed into two classes, so totally distinct as he would have it believed. That there may be such a form of disease as that which he has pictured under the term adynamic is certainly possible, but we altogether doubt that his own cases are such. We will grant, also, that they present many points of distinction from his dynamic cases; but with this reserve, that the distinction appears to consist rather in the accessory circumstances, than in the nature of the diseased processes; or, in other words, that the series of actions which lead to the formation of dropsy are generally, perhaps always, identical, but that they may take place in subjects very differently situated, and in very different conditions of the system. We will not venture to extend these remarks to purpura; first, because the pathology of that disease is yet too obscure to authorize any general assertions, and secondly, because we do not at present wish to draw conclusions from facts other than those which Dr. Stoker has laid before us; even in some of those, however, we conceive it would not be difficult, were we so inclined, to find matter which might, to a certain extent, be opposed to his own views. We repeat, however, that such is not our object, and that we prefer declining to prejudge a subject so uncertain, and yet so important in all its bearings.

Dr. Stoker thinks that the *modus operandi* of blood-letting in general, in removing dropsy and purpura, has received very important illustration from the experiments of M. Magendie, and the arguments which Dr. Paris has founded upon them in the last edition of his *Pharmacologia*. At the same time that he believes that those experiments and observations clearly establish the fact, that the removal of dropsical effusion by venesection, arises chiefly from the relief of that excessive congestion found in those experiments to be incompatible with absorption; he is also of opinion that in some instances, especially in drop-

ies accompanied with very sizy blood, this remedy farther operates by tending to restore the function of sanguification in the liver and lungs, thus counteracting the *lensor*, by which the action of the exhalents, as well as of the absorbents, had been clogged.—p. 163.

The author next proceeds to speak individually of some of the principal remedies he has made use of in the treatment of dropsy and purpura.

*Blisters.*—"In almost all the cases detailed in the preceding pages," says he, "and in which the connexion between the diseases and the state of the biliary system was manifest, blisters to the right hypochondrium were employed with most decided benefit."

"The symptom accompanying such effusive tendencies, which has led me chiefly to connect them with diseased function of the liver, and thence to this remedy, demands particular notice on that account, and also as one indicating extreme danger, and sometimes offering a fatal prognostic. It consists in either obstinate, gross, green, vomiting, such as attended on some of the worst cases both of purpura and dropsy, or the still deeper green alvine discharges which so generally accompany hydrocephalus and effusion on the brain in bad fevers."—p. 167.

"The tendency to effusion on the brain or other parts, connected with green vomiting, green purging, or such other symptoms as denote derangement in the hepatic system, I suppose to be produced in consequence of the function of the liver, either being insufficient to separate, as in health, the denser parts of the dark, venous, blood conveyed to that organ, or of a morbid secretion by the sanguiferous or hepatic system, either of which renders the whole circulating mass less fitted to undergo complete sanguification in the lungs, or to supply the purposes of the greater circulation. A blister applied to the right hypochondrium, appears to me to act in a three-fold capacity, as it does when applied to the thorax in pulmonary diseases. First, as a stimulant applied as directly as possible to the vessels affected, it increases their activity. Secondly, by thus interrupting the course of diseased actions, the inherent, vital, and corrective power tending to the recovery of the function, is less obstructed. And, lastly, the functions being thus restored, a fit pabulum for circulation, and for the various secretions, is provided."

Before the practice of bleeding was ventured on in certain conditions of dropsy, with the same boldness as at present, Dr. Stoker deemed the various preparations of antimony, especially Dr. James' powder, to be the most efficient agents in the cure of almost every form of dropsy; and he still holds them as the most generally applicable to the removal of that disease, especially as they are capable of being combined with other remedies, so as to increase their influence, or direct them to par-

ticular objects.—p. 175. He is of opinion that antimonials have a primary or stimulant, and a secondary or sedative effect; also that they have some effect as alterants on the blood, as mercury has, and like it enter the circulating fluids. On this account he has combined them, and as he believes advantageously, with mercurials, in dropsy with sily blood, especially when connected with hepatic disease. He seems further to think, that among their other good qualities, they are capable of changing the nature of adynamic dropsy: at least so we understand the following passage.

“In many cases of dropsy, when bleeding is indicated, the efficacy of that remedy may be very generally promoted by the aid of antimonials; and in instances of adynamic dropsy I have not unfrequently, by combined formulæ of antimony and mercury, so changed the nature of the morbid condition of both solids and fluids, that bleeding became indicated, and was found effectual.”—p. 176.

Besides the more common effects of mercury, Dr. Stoker attributes to it, that of entering into and changing the condition of the mass of blood itself, and of interrupting such a morbid train of actions in the functions of the part affected, as habit had tended to establish. According to him, mercury is chiefly applicable in the form of dropsy, which he has called *melænous* or hepatic, administered, to use his own expression, with a view to its effects in attenuating the blood, and altering the morbid condition of the function of the part affected. He extends a somewhat similar sort of reasoning to *digitalis*: for instance, he ascribes to it the quality of entering and attenuating the mass of blood, thus affording to medicine an agency of the utmost moment in the relief and cure of diseases, especially of those which, like dropsy, often depend on increased or inordinate action of the vascular system, arising out of disorganization of the part engaged, morbid condition of the blood, or deranged function of the part.

We have thus endeavoured to give a tolerably full account of the peculiar views which Dr. Stoker has advanced, and have extended this article to a much greater length than the bulk of his book would appear to render necessary. But size is here no criterion of merit, and we conceive that we should hardly have done our duty if we had hastily passed over such a decided attempt at the re-establishment of the humoral pathology. The work undoubtedly contains much of what appears to us to be unsound argument and overstrained hypothesis, but at the same time it is impossible to deny that much ingenuity is shewn, and many striking facts brought forward in

support of the doctrines of which the author is a strenuous advocate. We speak with diffidence, because we know not how far others may be influenced by ideas which have made a powerful impression on ourselves, but we are much inclined to think that if generally known and fairly estimated, it is likely to create a considerable sensation on the mind of the profession, and to prove the means of exciting inquiry and investigation in new channels, perhaps with results which it would at present appear presumptuous to anticipate or to estimate.

Quitting such brilliant but uncertain speculations, we shall say a few words of what Dr. Stoker has, and what he has not done. We need not repeat the doubts which have involuntarily presented themselves to us as to the reality of the distinction he has established between his cases of dynamic and adynamic dropsy, farther than to say, that those doubts have acquired additional confirmation from a careful consideration of the curative principles which he has himself laid down. As to the connection of the changes of the blood with the production of disease, we are of opinion that Dr. Stoker has failed in adducing satisfactory evidence: we will allow that he has given very good reasons for supposing, that in certain diseases the mass of blood undergoes great and positive change, and this we consider as no small merit; but he has not at all succeeded in convincing us that this change stands in the relation of cause to such diseases; he has not even given any plausible reason for such a supposition: it must doubtless constitute an important and a formidable complication, but we again say, that we do not think it has been shewn to be a cause.

The length to which this article has extended, has made us think it more advisable to notice Dr. Stoker's account of the Influenza under a separate head, which will accordingly be done in another part of this Journal.

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We are obliged to postpone, for want of room, several valuable reviews by our most active contributors, of some recent works of interest. They shall appear in next Number.—EDITOR.

**QUARTERLY HISTORY**  
OF  
**IMPROVEMENTS AND DISCOVERIES,**  
BOTH AT HOME AND ABROAD,

IN

|                     |                     |                 |
|---------------------|---------------------|-----------------|
| ANATOMY,            | SURGERY,            | MATERIA MEDICA, |
| PHYSIOLOGY,         | PRACTICE OF PHYSIC, | PHARMACY,       |
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| MORBID DISSECTIONS, | FORENSIC MEDICINE,  | BOTANY, &c.     |

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**I. ANATOMY.**

**ANTOMMARCHI's Plates.**—We perceive that the Royal Institute of France has received the highly eulogistic report of M. Dumeril respecting this work, which we have shewn in a former part of this Number, to be a very shamefully plagiarised copy of the superb plates of Mascagni. The plates of the skeleton, we perceive, are announced, and these at least Antommarchi must get drawn, as he does not happen to possess those of Mascagni.

**Comparative Anatomy.**—In this fertile field we have so many labourers, chiefly foreign, and so many works and memoirs in illustration, that we could fill our whole Number with nothing else. As the subject, however, is less popular in this country, because, though interesting, it is less directly useful than many others, we must be brief. Oken, of Copenhagen, has published in the 7th Number of the *Isis*, a very learned paper on the Dentary System of Animals, and M. Geoffroi St. Hilaire has taken up the same subject in the *Mammalia and Birds*, in a work, the first part of which is just published. M. Gandolfi, of Bologna, in the *Opuscoli Scientifici*, pursuing this monographically, has investigated the dentition of the *sus scrofa*, and has found that the dentition is double, as in the wild boar.

**Hairs in the Stomach of the Cuckoo.**—M. Carus, in a paper in Oken's *Isis*, has proved that there exist hairs in the stomach of the cuckoo, attached to its internal membrane, and resisting digestion. This fact, together with their being constantly found

there (M. Carus having found them in twenty stomachs which he examined), proves that they are not, as had been imagined, the hairs of caterpillars swallowed for food

M. CRUVEILHIER on the *Anatomical Structure of the Trachea and Bronchia*.—This is a valuable paper, and as it may lead to interesting discovery, we shall give a copious abstract.

“Wherefore,” says M. Cruveilhier, “are the cartilaginous rings of the trachea replaced behind by a membrane? It is, say some, in order to facilitate the dilatation of the œsophagus; but this opinion is evidently erroneous, because the trachea and œsophagus are moveable in all directions, and if the œsophagus could not dilate forwards, it might dilate itself in the direction of both its sides. The structure of the trachea of certain animals, as that of the bullock and sheep, prove moreover this fact. Indeed, it may be remarked, that the cartilaginous rings terminate behind in an acute angle, in the form of the hearts on playing cards. The membranous part exists *within* this angle, which is not very yielding, considering the thinness of the cartilages behind the membranous part. The structure of this membranous part essentially consists of transverse muscular fibres, the use of which is evidently to bring together the extremities of the rings, and consequently to diminish the diameter of the trachea. As a proof that such is their office, the extent of the membranous parts is according to the degree of constriction of the trachea requisite to the different modulations of voice. Man, in whom the voice presents so extensive a scale of tone, has a trachea with a large membranous part supplying the place where the cartilaginous rings terminate. In the bullock the rings terminate behind by two convex extremities, which are generally broader than in the rest of the cylinder. The membranous structure is placed within this posterior part of the cylinder, nearly at the same relative distance from its anterior concavity, as in man. The portion of the rings prolonged behind the membranous part is much thinner and softer than that before it, so that they may be easily applied closely to each other, and thus permit the trachea to be narrowed, although much less than in man. Assuming the diameter of the trachea to be six, it may be constricted to four in man, and to five in the bullock.

“In attempting to determine the structure and uses of the longitudinal projecting lines, perceptible on the membranous portion of the trachea, I observed that these lines are formed of fasciculi of fibres, which I considered at first to be muscular, but which are evidently albugineous. These fibres line the whole cavity of the trachea, and are disposed, in a uniform manner, on all the cartilaginous part, whilst they form small fasciculi towards the membranous portion, imparting to it greater solidity, and facilitating the transverse foldings of the mucous surface. This fibrous membrane, intimately united to the mucous tunic on one part, and to the cartilaginous rings on the other, forms, by becoming thicker, fibrous

rings separating the cartilaginous rings, but occupying only their posterior or inner aspect, the rest of the interval between the cartilaginous rings being filled by a white adipose tissue, hitherto little known, and which covers, anteriorly, another very thin layer of fibrous tissue, that appears to be the perichondrium, extended from the first to the last of these rings. This adipose tissue, which in animals occupies the same space, is placed behind the transverse membrane. The fibrous membrane lining the cavity of the trachea is very elastic, and imparts much solidity to it, especially in its divisions.

*“ Structure of the Bronchiæ.—*The bronchiæ present the same structure as the trachea ; but the bronchial ramifications offer some remarkable peculiarities. Here, indeed, there is more of the membranous part, but the cylindrical form is complete ; the cartilaginous rings are replaced by segments of circles of several lines in breadth at their middle part, forming very nearly the third of the circumference of the cylinder. Each segment terminates in an elongated point, which is continuous with, or passes into fibrous tissue. Sometimes two adjoining rings are united at their middle portions. The rings are so disposed, that the one glides within the other, and they move with so great facility, that a slight pressure of the fingers causes a diminution of one half of the diameter of each cylinder. The albugineous longitudinal fibres, disposed in fasciculi, extend to the farthest extremities of the bronchial conduits, and support the fibro-cartilaginous segments : if this support is removed by dividing the fibres, the extremities of the segments project into the interior of the cylinder. A muscular membrane, consisting of circular fibres, also occupies the interior of the cylinders. May not this structure be viewed as a perfect apparatus of motion, and may it not be concluded that, were it possible for the eye to observe its operation during life, the bronchial conduits would be found to contract themselves to one half of their diameter, or even nearly to their entire obliteration, when exposed to chemical or other physical influences of an irritating nature ?

*“ The Lungs.—*At the margin of each division, the cartilaginous segments of the bronchiæ assume a particular form, so that the two fibro-cartilaginous laminæ unite in order to form a very acute angle ; a confirmation the most suitable for dividing the inspired column of air. The fibro-cartilaginous plate which corresponds to the continuation of the bronchial conduit, is larger than that which belongs to the branch given off from it. The cartilaginous rings soon disappear ; but this species of mechanism at the bronchial divisions continues to the entrance into a lobule. That part of the bronchial canal deprived of cartilaginous rings is very considerable, and is solely composed of the mucous membrane, of the fibrous fasciculi, and of circular muscular fibres. The bronchiæ and their divisions are united, by a loose laminar tissue, to the venous and arterial vessels, to the nerves, and to the pulmonary lobules belonging to these parts.

"On isolating the bronchial lobules in a small lung which I had submitted to a very fine injection, I had occasion to observe their relations, and to remark that those of the superficies come in contact at their adjoining margins, leaving also intervals between them, which are filled with other lobules. The lymphatic vessels are distributed in the cellular line interposed between these lobules. The blood-vessels begin not to be superficial until at the part where the cartilaginous rings disappear, and then they assume the tortuous disposition observable in the extremities of all the vessels. Respiration, or rather its offices, seem to be executed as well in this situation as in the vesicles of the lobules. These lobules are composed of vessels excessively delicate and minutely divided, and sustained by a very fine laminar tissue. The pneumo-gastric nerves proceed exclusively to the muscular tunic."

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## II. PHYSIOLOGY.

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DR. HANCOCK'S *Essay on Instinct*.—The author of this interesting work is already very favourably known to the profession by his writings; and will, we hope, long continue his useful labours. He has taken a most masterly and philosophical view of this very abstruse and difficult subject; but in some of the articles, he has been very sparing of illustration and detail; for example, on the extensive subject of migration, which is dismissed in a few pages. This was a subject which the venerable Dr. Jenner studied with enthusiasm.

Mr. Oliver French has published, in the first Number of the *Zoological Journal*, an ingenious *Essay on Instinct*, in which he opposes the doctrine maintained by Dr. Fleming and M. Cuvier, and denies all intelligence and liberty to the inferior animals. We think this position, carried to the extent which Mr. French has done, quite untenable.

MAGENDIE'S *Experiments on the Olfactory Nerves, explained by Mr. C. BELL*.—The discoveries of the French physiologists are very much like those of astronomers, who sweep the sky for comets—all random and guess work. English physiology is less dashy at first, but it wears better. Magendie's paradox, for example, that the olfactory nerves are not the nerves of smelling (see our last Number, p. 620.), is clearly and philosophically accounted for by Mr. Charles Bell.

"In the exercise," says Mr. Bell, "of the sense of smelling, parts are employed, which do not, at first, seem necessary. For the highest enjoyment or exercise of the sense of smelling, it is necessary that the stream of air inhaled through the nostrils should change its direction, and be increased in force. In breathing through the nose, the air is carried directly backward. If the nostrils are expanded in anxious or hurried respiration, the passage is enlarged,



and made more direct. But, perhaps, my reader is not aware that in each nostril there are two circular openings, the innermost something more than half an inch within the other. This interior circle expands, and becomes lower when the breath is forcibly drawn into the lungs; but in the act of smelling, it is much diminished and elevated. The change in the form and relation of the exterior and internal nostril is performed by the action of the muscles on the cartilages; and the effect of the change is to increase the force of the stream of air, and to direct it up towards the seat of the sense of smelling. In common breathing, some part of the effluvia float in the atmosphere reaches the seat of the sense; but fully to exercise the sense, it is necessary to concentrate and direct the stream of air, as I have described.

"It will now be comprehended how the destruction of the portio dura, or respiratory nerve of the face, affects the organ of smelling; for if, by the injury of that nerve, the motion of the muscles of the nostrils be lost, the breath may be drawn into the lungs through the relaxed passage; but it will not be drawn forcibly up towards the seat of the olfactory nerve, nor will the air brush over the surface on which the proper nerve of sense is expanded.

"A man, being paralytic on one side of the face, by the loss of power in the portio dura, was made to smell ammonia: it did not affect the paralytic side, because it was forcibly inhaled into the cells of the nose only on the side where the nostril was moveable. On trying the experiment on a dog, in whom the portio dura of one side had been cut, the same thing was manifested; he snuffed it up with the sound side, and showed the natural consequence of the irritation of the membrane; while he was not similarly affected, when the bottle was put to the paralytic nostril.

"Unless I had attended to the structure and function of the part, on witnessing these phenomena, I might have conceived that the seventh nerve was the nerve of smelling, like a noted French physiologist, who concluded, too hastily, that he had discovered the nerve of vision and of smelling in the fifth nerve. I allude to certain experiments lately performed in London by a distinguished visitor, [Magendie,] which afford a proof of the utter impossibility of reasoning correctly on these subjects without the knowledge of the anatomy. The olfactory nerve was destroyed, and ammonia put to the nostrils of the animal, and when the creature sneezed, it was a coup de théâtre! then the gentlemen congratulated themselves that it was discovered that the first pair of nerves was of no use!! The common irritability of the Schneiderian membrane results from the fifth nerve: why does the membrane possess this sensibility, and why is the sensibility joined to the actions of the respiratory system? Because these passages must be guarded as the larynx is guarded. When any thing offensive is lodged there it must be removed, and the means Nature employs is to drive the air by an instinctive action of the respiratory organs, violently and suddenly, through the nostrils. But what has this to do with smelling? As well might we destroy the olfactory nerve, and wonder that the

creature experimented on still coughed when the larynx was tickled.

"We have some observations on this subject, in Mr. Shaw's paper already quoted. 'The effect upon the nostril is the most obvious symptom, when the nerve is cut in the ass. If, after having cut the right nerve (*portio dura*), we hold the nostril for a short time, so as to prevent the animal from breathing, he will, when freed, begin to snort, but with the left nostril only. If we hold carbonate of ammonia to the paralyzed nostril, he will be affected; but if it be held to the other, he will snuff it up, and then curl the nostril, and have an expression in the whole of that side of the face, as if he were going to sneeze, while the right side will remain quite unmoved.'

"The rationale of this is worth attention; by the neglect of it, some physiologists and experimenters have appeared to much disadvantage. The act of smelling is not simply drawing breath; but while the breath is drawn, there is a conformity in the motion of the nostril, by which the air, loaded with effluvia, is directed to the seat of the olfactory nerve; that is to say, is made to circulate in the higher parts of the cavities of the nose, instead of streaming directly backwards into the posterior nostrils. This was the reason why, on putting the ammonia to the nostril which was still, the creature was not excited, although there had been nothing done to injure the sensibility of that side of the nose. If a man were simply to draw his breath in taking snuff, the powder would be drawn into his fauces and lungs; but to snuff, the point of the nose is drawn down, and the nostrils contracted, and then when the air is inhaled, the snuff rises to the superior cells, and stimulates all the interior of the nostril. Although by this stimulus he sneezes, the olfactory nerve has nothing to do with it. The luxury is in the stimulus of the respiratory system, through the excitement of the membrane, not in the odour as enjoyed by the olfactory nerve. The sensitive branches of the fifth are first excited, then the respiratory system is in a secondary manner affected; and to ascertain whether the mode of communication between the fifth and the respiratory nerves be affected at their roots in the brain, or at their extremities, is a fair question to be determined by experiment or reasoning."

**PHRENOLOGY.**—The increasing interest of this subject renders it incumbent on us, as journalists, to take some notice of its progress. The Editor's individual opinion, so far as he understands the facts, is, that they seldom support the conclusions drawn from them; but, as truth is the object of inquiry, it is but right to give every side a fair hearing. We cannot better introduce the subject than by the following sensible and well reasoned remarks of a clever physician, which reached us just as this sheet was going to press:—

"On the first promulgation of the doctrines of phrenology, every one was content to laugh at what he did not understand, for it was easier to ridicule the phrenologists than to answer their arguments. Now, however, the case is materially different. Every

person of liberal information has read and thought more or less on phrenological subjects, and will no longer be satisfied by the substitution of sarcasms for arguments. The public is no longer disposed to join in the laugh against the phrenologists, for it is natural to feel our pride hurt on having ridicule poured on a subject which we have thought worthy of serious consideration.

"Before proceeding to examine the question at issue, between the phrenologists and their opponents, we must premise a single remark. Phrenology being a science of observation, the professors of it frequently refuse to enter into abstract discussion. They complain, that while they bring forward facts, they are only answered by theories. Now while we willingly grant that the only mode of promoting the science of phrenology, or of forming a rational opinion as to its reality, is by actual observation, by comparing the intellectual and moral character of individuals, with the configuration of their heads, we must still maintain that there is a fair field open for discussion, independent of actual examination of the heads of individuals. In maintaining this opinion, we do no injustice to the phrenologists; for we only claim, in respect of phrenology, a right which we certainly possess in all the physical sciences. Astronomy and chemistry are, like phrenology, sciences of observation; but should any man pretend to have discovered in the heavenly bodies, or among chemical substances, phenomena obviously inconsistent with the principle of universal gravitation, or with the established laws of chemical affinity, we should certainly not be accused of incredulity, for distrusting the accuracy of such an observer, and refusing our assent to his conclusions, even though we did not directly prove the fallacy of his observations. Nothing more is asked in respect of phrenology; if the observations detailed by the advocates of that science, are either in themselves, or in the conclusions necessarily flowing from them, inconsistent with opinions certainly established, we are justified in rejecting such observations.

"In conformity with the view of the subject which we have just given, the arguments for and against the science of phrenology may be divided into two classes. The first class respects the relations subsisting between the doctrines of phrenology, and the doctrines of other sciences; the second contains the direct evidence from personal observation. The inquiries of the first class are of a general nature, and admit of more ample discussion, as depending upon general principles: those of the second class, although not less effective in producing individual conviction, yet being founded on observations, can carry their effect no farther than the individuals by whom the observations are made.

"The first series of arguments to be discussed respects the doctrines of phrenology, in so far as they are founded upon, or otherwise involve, the established principles of other sciences. Now phrenology is obviously founded on anatomy, and involves many important doctrines of physiology. It is intimately connected with metaphysical sciences, and not less intimately with morality and

religion ; we must, therefore, inquire how far the principles of phrenology accord with the principles considered as established in each of those branches of knowledge.

“ With respect to anatomy and physiology, there are several points on which we think the phrenologists right ; and there are, also, some on which we cannot agree with them. We fully concur in the principle which forms the foundation of all phrenological science, that the brain is the organ of the mind. Here however we must remark, that we use the term mind in a vague and popular sense, because we cannot describe it more precisely, without anticipating topics which will be more properly discussed in a subsequent part of this article. Taking the word, however, in the indefinite sense, we think the proposition we have just stated, supported by such a mass of evidence, physiological and pathological, that it admits of very little doubt, and as we believe a great majority of our readers will at once assent to it, we shall not exhaust their patience by enlarging upon the subject.

“ We farther agree with the phrenologists upon another fundamental principle of their science ; with regard to which, however, we do not expect the same concurrence in the opinions of our readers. We believe it at least probable that the different operations of the mind are not performed by the simultaneous action of the whole cerebral mass ; but, on the contrary, that particular mental operations are performed by particular portions of the brain to which they are respectively allotted. We are indeed very far from agreeing with Dr. Gall in the allotment of the cerebral functions over the surface of the cranium, which he has made, and which he believes himself to have recognized in nature ; but we are disposed to think, nevertheless, that the great outlines of his system are, at least, probably true : and it is obvious, that if this be made out, a point is gained of the highest importance in phrenology ; for if a correspondence be proved to exist between any one operation of the mind, and a particular portion of the brain, we thus disprove the action of the brain *in totality* ; and by determining the individuality of the function of one portion of the brain, we obtain strong analogical evidence of a similar individuality in the functions of the remaining portions.

“ In the system of Gall, four grand divisions of the brain are established ; the functions of which differ essentially from each other. In the posterior part of the brain are situated those propensities which originate in the social nature of man. In all animals they have for their object the preservation of the species ; but in man and other gregarious animals, they also are for the maintenance of the social state. In the lateral regions of the brain are placed those propensities which have for their object the preservation of the individuals stimulating all animals to provide for their sustenance and personal safety. The two remaining divisions are endowed with powers of a more exalted kind. The anterior part of the brain is the seat of the intellectual faculties, and in the upper

part are placed those feelings, or as Dr. Gall denominates them, *sentiments*, to which we owe the moral attributes of our nature.

"Thus far, we think, the doctrines of Dr. Gall at all events exceedingly plausible. The evidence in support of them is, unfortunately, not all of a kind which we can lay before our readers; for it depends in part upon our proper observations, and of course can produce conviction in none but ourselves. We shall, however, recur to this topic again, and in the mean time we shall adduce one argument, derived from comparative anatomy. Man is distinguished from the inferior animals principally by the perfection of his moral and intellectual character. Now, in what respects does the head of man differ from the heads of the inferior animals? Precisely in this; that in man, these portions of the head, which we have described as the seat of the moral and intellectual faculties, are exceedingly large, while in the heads of the inferior animals they are deficient or nearly wanting. Nor is this all. In some animals we discover considerable intelligence and some faint traces of moral feeling; and exactly in the same proportion do we find, that in these animals, the anterior and upper parts of the head are developed. The facts from which this argument has been derived, have been observed by every physiologist who has attended to the subject. The argument is not new, but it is not on that account less worthy of attention.

"While we thus think that there is considerable probability of the accuracy of the general divisions of Dr. Gall, we do by no means think that there is equally convincing evidence in support of the subdivisions which he has established. Our objections to this part of the doctrine are partly of a metaphysical kind, and partly anatomical; but it is of the latter only that we shall at present speak.

"Every one knows that the hemispheres of the brain present every where a convex surface, except at the base. The convexity is not indeed every where the same; thus it is much greater in the region of the temples and upper part of the brain than at the sides. Still, however, the different curves pass into each other in a manner so gradual, that the convex line is always maintained, and parts situated near each other, present always nearly the same degree of convexity. It may even be granted that at some places of the brain, at the sides for instance, the convexity is so inconsiderable, that the surface approaches to a perfect plane; and it surely will not be pretended, that instead of bulging outwards, the brain presents at any part a concave surface. The brain, therefore, may be considered as presenting every where a convex surface except at the base. The same observation applies to the skull. It also presents every where a convex surface but at the base. It is true that the convexity is often less apparent, owing to the varying thickness of the table of the skull. Thus the thinness of the squamous plate of the temporal bone, in respect of the bones around it, renders the side of the head much flatter than the corresponding part of the brain. Still, however, with these exceptions, it holds true that the skull presents every where a convex surface.

" In pointing out the preceding general law in the configuration of the head, our object is to shew that it necessarily implies a physical connection between certain phrenological organs, according to which they ought, in every case, to co-exist and manifest degrees of power in direct proportion to each other; while we shall at the same time endeavour to shew that the faculties of mind, supposed to be vested in these organs, are so far from exhibiting the same reciprocal dependance, that they are admitted by every one at all versant in the science of human nature, to be very little if at all connected.

" We have said, that though the convexity of the brain may be different in different regions, yet that parts situated in the same region, present nearly the same convexity of surface. Let us then take any two phrenological organs situated in the same region of the head, but not contiguous, and let us suppose these organs to be exceedingly prominent; it then follows, with all the certainty of a geometrical truth, that the organs intervening between the two given organs, must also be exceedingly prominent; for otherwise the surface extending between the two given organs would neither be plane nor convex, but contrary to the law of configuration, which we have stated above, it would necessarily be concave. In the same way would a remarkable deficiency in any one organ render it physically impossible for the contiguous organs to be much developed, for they could not be so developed without producing a concavity round the deficient organ. Now what we contend for is, that the physical connection which we have just demonstrated to exist between the phrenological organs, does by no means exist between the faculties of mind supposed to correspond with them. To set this want of correspondence in a clear point of view, we must take particular illustrations. Let us then take the organ of wit, situated at the upper and outer part of the forehead, and the organ of comparison, situated in the middle of the forehead. Let us suppose these organs highly developed, and it will then necessarily follow that the organ of causation, situated between them, is also highly developed. Yet who will pretend that there is the same reciprocal development among the faculties of mind supposed to correspond with these organs. There is not a more common variety of human mind than that of which the leading features are the faculties corresponding with organs of *comparison* and *wit*—clear judgment and good common sense upon the ordinary affairs of life, and the talent expressed by the term *wit*—but will any man pretend that these faculties, so often observed together, are never observed but in combination with the highest endowment of a philosophic mind, the power of tracing the connection between cause and effect? We have not, however, given to this argument all the force of which it is susceptible; for we have admitted, as part of the hypothesis of our theorem, that the organs of wit and comparison are both highly developed. For this blunder our mathematical readers will not easily pardon us; for we have stated a necessary truth, a

merely hypothetical. Let us now suppose that the organ of wit alone is developed ; but this organ being a double one, it follows that there is a development of the upper and outer part of the forehead on both sides, and of course of all the intermediate parts, for all are on the same region of the head. The organs of wit cannot, therefore, be developed without a correspondent development of the two organs of causation and the organ of comparison ; and that this objection is not merely theoretical, any one may satisfy himself by examining the head of a person in whom the upper and outer parts of the frontal bone are remarkably prominent, and he will find in ninety-nine cases out of a hundred, that the more central parts of the bone are also prominent. A wit is therefore, indeed, a highly gifted individual ; for not only does he possess the talent of combining his ideas in an extravagant and eccentric manner, but he possesses also, of necessity, a sound judgment and philosophic mind.

“ We could add many similar illustrations, in which phrenology is at variance with the character of the human mind, as it falls under our daily observation. This, however, we consider unnecessary, and we shall proceed to state another argument exactly the converse of the preceding. We have shewn that there are certain necessary relations between the bodily organs, which do not obtain among the corresponding faculties of the mind ; and we shall now shew, that there are certain necessary relations among the mental faculties which do not obtain among the bodily organs. Every phrenologist will grant that there is no necessary connection between the organs of *weight*, situated near the middle of the supra-orbital ridge, and the organ of number, situated near the external canthus. There is no necessary correspondence in their development ; the one may be deficient, while the other is exceedingly prominent. There is, however, in the powers of mind ascribed to those two organs a necessary and invariable connection, so that they are never found separate, but always exist proportionate to each other in energy. The organ of *weight*, as described by Mr. Combe, is that organ which enables us to estimate force or momentum. It is, therefore, one of the principal elements of the mind of the mechanical philosopher, and accordingly Sir Isaac Newton is remarked by the phrenologist just cited, to have a prominence of the size of *a bean*, near the middle of the eyebrow. Now, we will venture to affirm, that there never existed an individual who possessed in an eminent degree the talents just described, as constituting the *faculty of weight*, who was not at the same time a proficient in the mathematical sciences, for these sciences form the very foundation of the mechanical philosophy. The organs of *weight* and number ought therefore universally to correspond in their development, but in the system of Drs. Gall and Spurzheim we have shewn that no provision is made for the correspondence.

“ We must now conclude the anatomical department of our subject. We are sensible that we have left untouched many important topics,

but it has been less our object to present a systematic detail of the arguments employed on either side than to select those which we consider as most decisive. The length to which this article has been drawn out, compels us also to defer the remaining parts of the subject till another opportunity. We pledge ourselves, however, to resume it soon; for we remark with pleasure, that phrenology is continuing to attract more and more of the public attention. In this country, several able writers have expressed themselves in its favour, and in Scotland, Mr. Combe, and the other members of the Phrenological Society, are daily making proselytes. We understand, that Mr. Combe has very recently delivered a course of lectures to a numerous and respectable audience in Glasgow, where the doctrines of phrenology have been received with enthusiasm, and a phrenological society is on the eve of being constituted. We shall, therefore, take the earliest opportunity of redeeming the pledge we have just made of resuming this subject.

"In the mean time, we cannot but add one observation before concluding this article. We feel it a duty we owe to ourselves, to declare explicitly what we hope has been already, in a great measure, rendered obvious by the general tenor of our remarks, that we are very far from entering into the illiberal feelings with which the labours of Drs. Gall and Spurzheim have been but too frequently regarded, both in this and in other countries. We must profess that, independent of the respect we entertain for them as men of science, their characters stand high in our esteem for the unshaken fortitude with which they have persevered in their endeavours in the cause of science, in spite of the overwhelming obloquy which has been opposed to them. The promoters of truth never met with a more violent or more unjust persecution; and we cannot but look upon them with very similar feelings to those with which we regard the martyrs, whom neither the rack nor the stake could terrify into submission. In the whole history of the human mind, there is no instance of more strenuous and unwearied zeal, opposed as it has been by every species of calumny, misrepresentation, and abuse, the only instruments of persecution which, thanks to the progress of civilization, now remain in the hands of ignorance, intolerance, and bigotry."

A. B.

**DR. WOLLASTON on the Semi-Decussation of the Optic Nerves.**

"It is well known that, in the human brain, these nerves, after passing forwards to a short distance from their origin in the thalami nervorum opticorum, unite together, and are, to appearance, completely incorporated; and that from this point of union proceed two nerves, one to the right, the other to the left eye. The term decussation was applied to this united portion, under the supposition that, though the fibres do intermix, they still continue onward in their original direction, and that those from the right side cross over wholly to supply the left eye, while the right eye is supplied entirely from fibres arising from the left thalamus. In this



opinion, anatomists have felt themselves confirmed by the result of their examination of other animals, and especially that of several species of fish, in which it is distinctly seen that the nerves do actually cross each other as a pair of separate cords, lying in contact at their crossing, but without any intermixture of their fibres.

“ In these cases it is most indisputably true, that the eye upon the right side of the animal does receive its optic nerve from the brain, while that of the left eye comes from the right side ; but it is not a just inference to suppose the same continuity preserved in other animals, where such complete separation of the entire nerve is not found.

“ A certain arrangement of the optic nerves has suggested itself to me, which appears to afford a very probable interpretation of a set of facts which are not consistent with the generally-received hypothesis of the decussation of the optic nerves. Since the corresponding points of the two eyes sympathize in disease, their sympathy is evidently from structure, not from mere habit of feeling together, as might be inferred, if reference were had to the reception of ordinary impressions alone. Any two corresponding points must be supplied with a pair of filaments from the same nerve, and the seat of a disease in which similar parts of both eyes are affected must be considered as situated at a distance from the eyes, at some place in the course of the nerves where these filaments are still united, and probably in one or the other thalamus nervorum opticomum.

“ It is plain that the cord, which comes finally to either eye, under the name of optic nerve, must be regarded as consisting of two portions ; one half from the right thalamus, and the other from the left thalamus nervorum opticomum.

“ According to this supposition, decussation will take place only between the adjacent halves of the two nerves. That portion of nerve which proceeds from the right thalamus to the right side of the right eye, passes to its destination without interference ; and, in a similar manner, the left thalamus will supply the left side of the left eye with one part of its fibres, while the remaining halves of both nerves, in passing over to the eyes of the opposite side, must intersect each other, either with or without intermixture of their fibres.

“ A series of evidence in such apparent harmony throughout, seems clearly to establish that distribution of nerves I have endeavoured to describe, which may be called the semi-decussation of the optic nerves.”—*Philosoph. Transactions for 1824.*

DR. WOLLASTON on *Single Vision with Two Eyes*.—“ So long as our consideration of the functions of a pair of eyes is confined to the performance of healthy eyes in common vision, when we remark that only one impression is made upon the mind, though two images are formed at the same moment on corresponding parts of our two eyes, we may rest satisfied in ascribing the apparent unity of the impression to habitual sympathy of the parts without endeavouring to trace further the origin of that sympathy,

or the reason why, in infancy, the eyes ever assume one certain direction of correspondence, in preference to squinting.

"But, when we regard sympathy as arising from structure, and dependant on connexion of nervous fibres, we therein see a distinct origin of that habit, and have presented to us a manifest cause why infants first begin to give the corresponding direction to their eyes, and we clearly gain a step in the solution, if not a full explanation, of the long agitated question of single vision with two eyes."—*Philosophical Transactions*.

M. GASPARD'S *Experiments on the Cuckoo*.—The first article in Magendie's *Journal*, No. 3, Vol. IV. details the attempts of M. Gaspard to rear cuckoos, and preserve them through the winter. In five or six different experiments of this kind, he was altogether unsuccessful; the birds always losing their feathers, and dying by mid-winter. One lived till March. He observed nothing like hybernation, and therefore concludes that the cuckoo must migrate.

M. CHEVREUX on *Cholesterine in the Bile*.—This chemist, from his having discovered the presence of cholesterine in the bile, is persuaded that we may hence be led to chemical remedies for biliary calculi, on the same principle that lithontriptics are prescribed for gravel and urinary calculi, since the discovery of the uric acid.—MAGENDIE'S *Journal*.

### III. PATHOLOGY.

*Sublingual Pustules in Hydrophobia*.—The Prussian Minister has addressed a circular to the medical profession, recommending a careful search for the sublingual pustules, mentioned by M. Marochetti, in cases of hydrophobia. In consequence of this Dr. Baumbach, of Erfurt, in attending a woman who had been bit in the finger by a rabid cat, and was decidedly hydrophobic, found the pustules, cauterized them, and the patient recovered. Etmuller and Ideler had not the same success in treating an old man of sixty, near Mersebourg, who was bit by a rabid cat on the 23d March, 1823. He remained well till the 16th of May, when he was seized with a burning, eating pain, in the place which had been bitten, though it had been a long while cicatrized. He was also convulsed and hydrophobic. They found four sublingual pustules, which they cauterised as Marochetti directs, but the patient died the 19th of May.—*Bulletin Universel*, Oct. 1824.

*Irritation distinguished from Inflammation in the Mucous Membrane of the Bronchia*. By M. NAUCKE.—In the natural state,

or where there only exists an excess of irritation, the matters secreted by the different mucous membranes have always a well-marked acidity; while, on the other hand, if these membranes be inflamed, alterations of their vital properties supervene; the nature of the secretion is changed, and becomes alkaline. These two states are easily recognized by a morsel of paper tinged blue by turnsol. When the matter expectorated is acid, the paper is turned red; while it assumes a deeper blue, or is even changed from red to blue, if the matter be alkaline.

M. Nauche has examined the expectoration, with respect to its acid and alkaline character, in the diseases of the respiratory organs. He believes, from this inquiry, that they may be divided into matter produced by irritation—an increased secretion of the mucous follicles which line the membrane of the air-passages—and into matter, or expectoration, which results from their inflammation. He has observed that the white, mucous, frothy expectoration, which is frequently brought up in large quantities by persons in a state of agony, has always an acid character, when the air-passages have not been the seat of previous disease. This character is likewise found in the white, frothy expectoration which occurs during the whole continuance of pleurisy, whether acute or chronic; and at the commencement of pneumonia, when the matter expectorated is white, or even yellow. It is often lost in the course of this disease, and re-appears towards its decline. The acid expectoration is likewise found in emphysema of the lungs and scrofulous phthisis, when the tubercles are but little developed—in the state called crude. It is evident, in all these cases, that the mucous membranes which furnish the expectoration are only in a state of increased excitement, and that they are in no degree inflamed. M. Nauche has likewise found acid expectoration in certain advanced cases of phthisis. He believes that this depended upon these matters being the product of an increased secretion of the mucous membrane lining the excavations formed by the tubercles.

The expectorated matters, on the contrary, are always alkaline in the inflammation of the mucous membrane of the bronchiæ, and in all the cases designated by the names of acute and chronic colds, or mucous phthisis (*phthisis muqueuses*). Although this expectoration is not regarded as purulent, it is nevertheless a kind of pus peculiar to inflammation of these membranes, and analogous to the purulent serosity which is furnished by serous membranes when in a state of inflammation. The expectoration likewise becomes alkaline in peripneumony, when the inflammation of the pulmonary tissue communicates itself

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to that of the mucous membrane of the bronchiæ; and this secretion is the product of the inflammation of these two tissues. The expectoration is likewise alkaline in phthisis pulmonalis, in the second or third stage, when the tubercles become broken down. It is usual, in such cases, to find the internal membrane of the lungs deeply altered.

It frequently happens, particularly among phthisical patients, that both these kinds of expectoration are to be found in the same vessel. That which results from an augmented excitement comes up most easily—is white, frothy, and acid; the other is brought up with difficulty—is yellow, thick, and alkaline. In this disease, when the patient has only the former kind of expectoration, his life is often in the greatest danger.—M. GUIBERT *sur le Croupé, &c.*

*Adhesions and False Membranes.* By M. SCOUTETTEN.—“Although inflammation has long before disappeared, the peritoneum frequently preserves very visible traces of the lesion which it had experienced. Adhesions or false membranes are met with uniting the abdominal organs to each other, disturbing their movements, and occasioning pain which may become very violent. When adhesions are formed, the organs are usually found, upon dissection, intimately united to each other by means of a very dense cellular tissue, which frequently requires much force to separate it. Similar adhesions are not unfrequently observed between the liver and the inferior surfaces of the diaphragm; and they are still more frequently formed between the spleen and the peritoneum of the left hypochondrium. Adhesions of the intestines are more rarely met with than the preceding; and they generally take place through the medium of false membranes. These adhesions appear to me to be occasioned by slight chronic irritation. I think that an active state of inflammation could not produce them, for the presence of the albuminous effusion, which is always its result, is opposed to so intimate an adhesion as that which is generally observed in the cases under consideration.

“False membranes may be viewed with relation to their extent, their situation, and their mode of disposition. Cellular productions of different sizes are seen placed on various parts of the peritoneum, uniting accidentally two or more organs, and extending irregularly, and without determinate form. They sometimes consist only of isolated filaments, as delicate as fine hairs; and at other times the filaments are numerous, collected together, interwoven, and formed into a net-work of considerable size. In place of consisting of mere filaments, the false productions may be several lines in breadth, or even several inches; they are generally of this extent in adhesions of the intestines to the anterior parietes of the abdomen. These false membranes are usually colourless and transparent, presenting a close analogy to the peritoneum itself. In some cases, both the

laminae of the cellular productions are separated, and contain a little concrete albuminous matter, or even some hydatiform vesicles. These false membranes do not always offer the characters which I have now assigned to them: they generally seem to commence in the form of villousities, which are scarcely perceptible, formed by a vitiated secretion of the inflamed portion of the peritoneum. These villousities become, in consequence of an albuminous production, of considerable thickness and opacity, until at last they terminate in being less and less marked, in proportion as their organization becomes more complete. About the twenty-first day reddish filaments, which are proofs that blood-vessels are beginning to be developed, may be discerned. Stoll first noticed this fact; Baillie succeeded in injecting them; and M. Dupuytren has been equally successful. M. Villermé has repeated these experiments, and has ascertained that they cannot succeed completely until the blood-vessels have arrived at their fourth period of formation.

"These false membranes ought to be always regarded as produced by inflammation of the peritoneum. Their number may be so great, that all the abdominal organs may be united into one mass. I lately observed a case in which this extent of derangement was observed. It was that of an aged female, who had borne several children, and whose confinements had always been attended with peritoneal inflammation."

#### M. VELPEAU'S *Pathology of Phlegmasia Dolens*.

"The author has related three cases of this disease, in all of which some alteration, more or less considerable, was found at the sacro-iliac symphysis of the same side on which the limb was affected; purulent effusions in the peritoneum, particularly about the genital organs; abscesses in the diseased limb; and lastly, a mixture of pus and coagulated blood in the veins of the limb, with evident traces of inflammation of their coats in two of the cases. M. Velpeau regards the alteration of the symphyses as the original source of the disease, which afterwards becomes extended to the limb: the veins, according to him, being only consecutively affected, whether the pus in their cavities may have been originally formed there, or introduced by absorption. The veins were incompletely obliterated. These facts agree with the observations of M. Bouillard on the causes of certain kinds of dropsy; and our readers will find, by referring to our analysis of Dr. Davis's paper, in the last volume of the Medico-Chirurgical Transactions, that these cases are in confirmation of his views, although his opinions are not entirely the same as those of M. Velpeau."

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### IV. MORBID DISSECTIONS.

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#### M. RECAMIER'S *Case of softening of the Brain*.

"The patient, a female, aged forty-four, was subject, for the last nine years of her life, to epileptic attacks. They supervened at

first from a fright, and became less frequent and less severe, so that she had intervals of three, four, or eleven months between each. The menses having ceased at the end of February, she was seized with a paroxysm of epilepsy, which left after it violent cephalalgia, and a constant, but peculiar kind of stupor. On the third day after the paroxysm, the *left* side was paralysed both in the faculty of motion and of feeling. Convulsive motions, attended with loss of recollection, came on during the fifth day. They scarcely presented any interval, and were much more marked in the limbs of the *left* side. She died on the eleventh day.

“ *Dissection*.—Softening of the substance of the convolutions of the brain was remarked in the superior and anterior parts of the right hemisphere, to the extent of three inches in each direction. The grey substance was softened to a nearly diffuent state, and presented a grey gelatinous appearance. The medullary part of the brain was equally softened, was of a dull white colour, friable, and granulated. The pia mater, penetrating the anfractuositities of this portion of the brain, was considerably thickened, as well as that part of it connected with the arachnoid. This latter presented a milky appearance. Professor Recamier regarded the semi-gelatinous softening of the grey substance of the brain as the result of a chronic inflammation intimately connected with the state of the pia mater and arachnoid, which had given rise to the previous attacks of epilepsy, whilst the dull-white softening of the medullary part had occasioned the paralysis that supervened shortly before the patient's death.”

Mr. HEBB's Case of Poisoning by Oxalic Acid.—A man, aged fifty-seven, swallowed an ounce of oxalic acid, dissolved in a tea cupful of water, believing it to be Epsom salts, and notwithstanding all the medical means which could be employed, he died. He complained chiefly of great pain in his back and thighs, and inability to move his limbs. Afterwards the abdomen became painful to the touch, and much black matter was evacuated from the bowels, mixed with bloody shreds.

“ *Dissection*.—I examined the body, about ten hours after death, in the presence of several medical gentlemen.

“ The upper extremities, chest, and back, were much discoloured; the face had the appearance of one who had been hung; a considerable quantity of dark, frothy fluid, had issued from his mouth; the abdomen was tumid. On cutting into the cavity of the peritoneum, a small quantity of sanguineous fluid escaped. There was nothing remarkable in the general appearance of the viscera, excepting the great distention and discolouration of the small intestines.

“ The mucous membrane of the pharynx and œsophagus appeared as if it had been scalded; that of the latter easily separated from the muscular coat, and on it were seen a number of minute, elevated, and opaque patches. The stomach contained about a quarter of a

pint of thickish fluid; its villous coat was excessively pulpy, in many places of a black colour, in others highly inflamed. The mucous membrane of the small intestines exhibited pretty much the same appearances as that of the stomach, though in a less degree; they contained a small quantity of reddish pulpy fluid. There were many large patches of extravasated blood in the large intestines. The peritoneal coat of the stomach and intestines was much inflamed. The liver and gall-bladder appeared healthy; the latter was nearly empty. The spleen was smaller and harder than usual. The kidneys were healthy, but the pelvis of each was considerably more vascular than ordinary, and this extended a little way through the ureter. The bladder was natural; it contained a considerable quantity of urine. The mucous membrane of the larynx and trachea, and the lungs themselves, were intensely inflamed. There was no fluid in the pericardium, and the heart was healthy."—*Med. Rep.*

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## V. SURGERY.

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Mr. ANDERSON's *Operation for applying a Ligature to the external Iliac Artery* \*.

"The patient is to be placed upon a table, as for the operation of hernia, and his groin being shaved, the surgeon will proceed with a scalpel, to make an incision through the common integuments, commencing at about an inch from the anterior superior spinous process of the ilium towards the pubis. This incision will be carried a little short of three inches in length, in a line about half an inch above, and nearly parallel to Poupart's ligament; its inner extremity taking a slight curvature upwards, that it may end over the spermatic cord as it passes through the external abdominal ring. The integuments will be dissected downwards, until in a line with the ligament, then upwards for about an inch, throughout the whole course of incision. By this, the tendon of the external oblique muscle is to be cleanly laid bare, and afterwards divided for two inches and a half in the direction of its fibres, the incision terminating a little short of the external abdominal ring. This cut will also take a course about half an inch above Poupart's ligament. The tendon is now to be elevated by the handle of the knife, from off the internal oblique muscle, so that the oblique canal may be clearly exposed. This will be found of easy accomplishment, for it is only connected to the parts below by a very delicate reticular membrane, which can be readily broken through.

"The spermatic cord will now be seen taking a passage towards the external ring, from under the edge of the internal oblique

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\* We take this from Anderson's *Surgical Anatomy*, an American work, which we have frequently mentioned with approbation. A very few copies have reached this country, and may be seen at our publisher's.

muscle, about two inches from the pubis. This part is to be lifted on the finger in order that its sheath, the cylindrical process of fascia which proceeds from the ring, may be opened. This will be done by lifting the pellicle with a pair of dissecting forceps, and then cutting it slightly with the scissors or scalpel. When this is accomplished, the little finger of the right hand will be passed into the opening, and the sheath will direct it to the internal abdominal ring, immediately behind which will be felt the pulsation of the external artery.

"The peritoneum will not be found much in the way in this operation. Pressing against its angle with the finger a little, will elevate it sufficiently to allow of the artery being secured. It will be remembered that this membrane leaves the anterior abdominal parietes some little way above Poupart's ligament, to turn upon the iliacus and psoas muscles and the iliac vessels. It therefore takes a free course at this part, and does not make an acute angle with itself, as it would if it was continued down, before and behind, to be attached to the back edge of Poupart's ligament.

"An aneurismal needle of silver being now introduced through the internal abdominal ring, it will be insinuated under the artery from its outer side, and moved a little below, that the vessel may be separated from the fascia iliaca, with which it is pretty firmly connected; as well as from the iliac vein, to which it is also attached. The artery will now be elevated through the ring. This will be accomplished more readily by raising the thigh towards the abdomen, and then a silken ligature of sufficient size is to be passed through the eye of the instrument, that it may be drawn under the vessel. The artery will now be tied above the going off of the epigastric and circumflexor ilii vessels, and the ligature, when the part is dressed, is to be allowed to remain without the external wound. One or two interrupted sutures may be applied through the integuments; and when a slight compress and bandage have been added, the patient may be put to bed."

*SNELL on Artificial Palates*\*.—This seems to be a very ingenious work, and we cannot recommend our readers, who may be interested in the subject, to a better guide than Mr. Snell, whose cases amply attest the success of his practice.

*M. DELPECH's Amputation of the Hip-Joint*.—In our last Number we gave an abstract from M. Græfe's Memoir on this operation, containing the case in which he employed the method he has so well described. For the purpose of comparison, we now present our readers with a short account of M. Delpech's. The latter, although more fortunate in the event, falls far short of the German professor's, not less in the degree of perfection the process admits of, than in the dexterity of its performance.

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\* *Observations on Obturateurs, or Artificial Palates, with Cases.* By J. Snell, M.R.C. Surgeon-Dentist. pp. 52, 8vo. London, 1824.



"The case that rendered it necessary was necrosis of the femur, which had been much neglected, and had existed nineteen years. The patient entered the Hospital of Saint Eloi, at Montpellier, August 20th, 1823. His age was thirty-four. He was hectic; the whole thigh was swelled and much deformed by the devastations made by abscesses, fistulous openings, and cicatrices. The fleshy parts of the thigh were as hard as wood. A probe passed into any of the numerous fistulæ with which it was perforated, came in contact with the denuded bone. In some places, it appeared to enter an osseous canal, but there were not any loose portions of bone. During nearly a year, every thing that art could suggest was tried, but without benefit; the patient lost strength, and it became necessary to decide what was to be done for his relief. A common amputation was impossible, as the disease of the bone could be traced up to the trochanter minor. The soft parts were thickened and indurated up to the pelvis; it was even doubtful if the swelling of the bone did not project inwards near the groin, so as to increase the difficulty of forming a flap on the inner side of the joint. It was also probable that many of the vessels were much enlarged, and doubtful whether they could be so far detached from the cellular tissue as to admit of being tied with facility. "If this should also have proved the case with the larger vessels," says M. Delpech, "what security was there for being able to secure them by ligature in time to prevent excessive bleeding?" For these and similar reasons he determined on tying the femoral artery previous to commencing the operation.

"On the 21st June, 1824, he made an incision an inch and a half long, immediately below the crural arch, but soon met with difficulty in exposing the artery, owing to the diseased state of the parts. He therefore preferred extending the incision an inch upwards, and by that means soon laid the femoral vessels bare; he plainly felt the beating of the artery and the shape of the vein, and passed a flexible grooved director from within outwards under the artery only. A ligature was next carried under it, tied, and one of the ends cut off. The patient was brought to the foot of the bed, and the lower extremities separated as much as possible. Again examining the inguinal region, and fearing that the swelling of the inner and upper part of the bone might embarrass the operation, M. Delpech made, with a scalpel, an oblique incision at the inner and upper part of the thigh to serve as a guide in forming the flap on that side, resolving also to continue the operation in the same manner if he could not succeed by a more expeditious one. He plunged a single edged knife into the inguinal region on the outside of the point where the artery had been tied, directing it towards the lower part of the buttock, and as much outwards as possible, passing close to the neck of the femur above the trochanter minor. A slight turn of the edge served to clear the latter process, and it then passed, more easily than had been expected, along the inside of the thigh. The flap was raised by an assistant, and the neck of the

bone in the course of the first incision, thus making a conical flap, eight inches long, and composed of all the soft part on the inside of the femur, with the trochanter minor thus exposed; the thigh was carried into a state of abduction, and the head of the bone made to project at the base of the flap. M. Delpech divided the capsule, and some muscular fibres with the scapel, thus admitting the luxation of the head of the bone and the section of the inter-articular ligament. With the long knife he then made a horizontal section of the soft parts on the outer side of the limb, the incision in the skin however being curved so as to retain a portion of it. In this part of the operation he cut into an immense abscess, which had detached the skin to a great extent upwards. The wound made in the operation was enormous, but irregular in its form, the more so because the parts were glued together by inflammation, and of an extraordinary consistence, circumstances which rendered the ligature of the vessels embarrassing, by the consequent difficulty of raising their orifices from the surface of the wound. M. Delpech felt gratified at having previously tied the femoral artery; it, together with the profunda, were obliquely divided on the surface of the inside of the wound; both bled a little, doubtless by anastomosis. He was obliged to tie their extremities, and from the difficulty he experienced in doing so, says, that he was convinced, that had they furnished a quantity of blood corresponding to their size, the patient would have been in extreme danger. There was less trouble in tying the ischiatic and obturator arteries, as well as two branches of the profunda. M. Delpech resolved on attempting to procure adhesion, notwithstanding the state of the parts of which some idea, may be formed by the fact, that it required some trouble to bend the flap on the inner side of the thigh, so as to make it cover the joint, and come into contact with the divided surface on the outer. This was at last effected, however, by management, and by the assistance of several points of suture and abundance of sticking plaster. It does not form a part of our purpose to give a minute account of the progress of the case: it is sufficient to say, that a considerable portion of the angles of the wound united by adhesion, and that the thickened, indurated, state of the soft parts gradually subsided. The centre of the wound, and the abscess which had been opened in the operation, suppurated freely for a considerable length of time: the patient never experienced any very severe or alarming symptoms; the fibro-cartilaginous rim of the cotyloid cavity came away by exfoliation; and, lastly, the wound was healed and the patient had recovered completely previous to the publication of the case in September 1824."—*Revue Medicale*.

*M. DELPECH on the best Mode of Lithotomy.*

"For more than four years, in the public lectures on pathology and the practice of surgery which I have given at Paris, I have furnished an analysis of the description which Celsus has bequeathed us, of the operation for stone, and such as was performed in his

time. I have shewn that the author's Latin has not been understood, and that the operation which he describes ought to precede every other which has been described by modern authors, even to the present day.

"Celsus expresses himself in these words: "*Juxta anum incidi cutis plaga lunata, usque ad cervicem vesicæ debet, cornibus ad coxas spectantibus paululum.*" Such is the direction given respecting the section of the external parts. They have thought to find in these terms the idea of a semilunar incision, the convexity of which would be turned towards the anus, and the concavity towards the raphe and scrotum; but it is impossible to reconcile this idea with the direction contained in the words, "*cornibus ad coxas spectantibus paululum.*" In the attitude which Celsus gives the patient, the hips are not apparent but towards the back part; and it is to this side that the extremities of the crescent, which the incision ought to describe, are to be directed. Then they are really *ad coxas spectantibus paululum*. They should have a direction altogether opposite to this, if they were described from before. It is necessary, then, to understand, to translate the phrase of Celsus in the following manner: "In front of the anus a semilunar incision ought to be performed, which penetrates even to the neck of the bladder, and which embraces the anterior part of the circumference of the anus itself, and so that the extremities of this incision may be a little turned toward the hips." This latter restriction, which is literally contained in the passage of Celsus, induces one to think that the curve of the semilunar incision ought not exactly to conform to the curve of the anus; that is to say, that it ought not to form the segment of a circle described around the anus, and of which the anus would be the centre; but the segment of a circle, the central point of which should be placed considerably behind the anus. By this contrivance the centre of the curve would be found to approach nearer to the anus than its extremities.

"Celsus pursues the subject thus: '*Deinde ea partequa strictior imo plaga est, etiamnum sub cute altera transversa plaga facienda est, qua cervix aperiatur.*' It is impossible to suppose that this wound was made much in front of the former. If it had been done thus, the upper part of the neck of the bladder and the anterior angle of the prostate might have been reached by a transverse incision, which would have been done either to a very little extent, or would have separated entirely the neck of the bladder and the canal of the urethra. Yet the author adds, relatively to the deep incision which ought to be performed, "*donec urinæ iter pateat sic, ut plaga paulo major quam calculus sit.*" These latter directions it would have been impossible to follow, if the external incision had been turned forward.

"Certainly at the time of Celsus, anatomy was not very much cultivated, yet enough was known to enable them to make an incision into the neck of the bladder sufficiently large to extract any calculus. That part of the operation is next described in which the

stone is brought to the fore part of the bladder, and held there by the finger, previously introduced into the rectum, and it ought also to raise the base of the prostate gland, the vesiculæ seminales, and the vasa deferentia; they then made a transverse incision into the neck of the bladder, of a sufficient size to admit of the extraction of a very large stone. Such was, without doubt, the operation for stone among the Romans, and it is clear that its effects are attributable to the want of sufficient anatomical knowledge; they knew the form, but they were ignorant of the intimate structure of the parts. If Celsus had made his internal or second incision like his external one, and had used a more precise guide to the surface of the stone than mere feeling of it, his operation would have approached very near to the perfection of the modern operations. Such is the doctrine which I taught at Paris, a long time ago, and I can appeal to the evidence of 150 students who attended my lectures. In my course of clinical lectures at Montpellier, twelve years ago, and on all occasions when I have had the opportunity, I have introduced the same ideas; and I have insisted on them with much more force since the performance of the recto-vesical operation for the stone."—*Revue Medicale*.

**Mr. A. ROBERTSON'S Case of Fracture within the Capsular Ligament.**

"On the 25th of June, 1822, William Darwin, aged sixty-two, a tall athletic convict, of a sanguine temperament, fell, with a very inconsiderable violence, across a piece of timber in the Dock-yard, his left hip coming in contact with the wood. On rising, he felt an acute pain in the region of the acetabulum, but no other inconvenience, for he walked on board to exhibit himself to the surgeon-man.

"From finding him *ranked up* with the sick of the hulk on my morning visit of the 26th, from his walking on board, and from his own account of the accident, I did not suspect any serious injury of the joint, and treated the case as one of concussion. On the 29th, however, he complained of a very sudden and very agonizing accession of pain, which induced me to subject him to a more critical examination. No evident alteration in the size of either hip could be discerned, but a shortening of the limb was conspicuous, which was rendered more evident by making him stand on the sound limb; extension removed this difference, but on being freed from restraint it again assumed its morbid shape; the knee and foot were everted, and rotation greatly increased his pain.

"I removed him to the hospital as a case of fracture within the capsule, but continued attention for a period of six months to position (chiefly with the view of restraining the motion of the pelvis, and of securing the limb), made no other alteration in the symptoms than a gradual diminution of pain. A pair of crutches were given him, he was placed on the invalid list, and remained so till the 26th of December, when he died from a general dropsy.

"On dissection, the injury proved a transverse fracture of the head of the femur, within the capsular ligament. No species of union had taken place. The upper portion of the fractured bone was retained in situ by the sound ligament; tolerably smooth on its surface, but without any ossific deposit. The lower portion very irregular, with several detached pieces of bone adhering to the insertion of the capsular ligament. Between the acetabulum and the portion of bone retained in situ by the ligament were several small, oval shaped, loose, cartilaginous substances, apparently fragments of bone. The capsular ligament was partially lacerated, in a line above the trochanter major, and greatly thickened in its insertions.

"ARCH. ROBERTSON\*."

"Convict Hospital Ship, Sheerness,  
1st December 1824."

MR. BENJAMIN BELL on *Interstitial Absorption of the Neck of the Thigh-Bone*.—A brochure, under this title, with Lithographic Plates, is now before us, and is worthy of the attention of all who wish to investigate this much discussed subject. The name of Mr. B. Bell is an excellent passport for a young man; and we are happy to say that our hopes have not been disappointed in this creditable, though small performance.

## VI. PRACTICE OF PHYSIC.

*Treatment of Poisoning by Opium*.—The notice which has lately been taken of treating, by the cold affusion, cases, in which an over dose of opium has been swallowed, makes additional testimony to its efficacy important; particularly as a claim to the recent discovery of this has lately been set up, though the case that occurred at Rome, and published in this Journal, disproves it, were there no other. We have been favoured by the following case of analogous treatment.

*Case, in which an over Dose of Laudanum was swallowed, and successfully treated.* By WILLIAM DUNLOP, M.R.C. M.W.S. Lecturer on Medical Jurisprudence, &c.—The case occurred in a soldier at Portsea barracks, in the beginning of the year 1816.

"About ten o'clock at night, I was called to see a patient complaining of violent pains in his stomach and bowels. I found no fever accompanying these spasmodic symptoms, but they themselves being extremely urgent, I ordered him eighty drops of laudanum, and as many of the essential oil of cinnamon. He was considerably relieved by this, and I therefore left him in charge of an orderly of the Hospital, with instructions to give him forty drops

\* From the Fourth Edition of Sir A. Cooper's Work on Dislocations.

more if the attack should be renewed. In the course of a short time after he had a second attack, similar to the first, though not quite so violent, and the additional forty drops were accordingly administered to him. This again allayed the pain; but it gave him a most mistaken idea of the elevating effects of opium; and calculating that when a little did him so much good, a great deal must of necessity render him perfectly happy, he insisted on having more: this, however, the orderly positively refused; and to prevent the possibility of his getting at it, he went to sleep with the laudanum bottle under his pillow. The patient observed this, and waited till the orderly was sound asleep, when he stole quietly to his bed-side, and possessed himself of the bottle. How much he might have swallowed it is impossible to say exactly; but he told me afterwards, that he measured, as well as he could in the dark, six table spoonfuls. In replacing the bottle he awakened the orderly, who immediately started out of bed and ran across the barrack yard to my room. He instantly awoke me, and told me of what had happened. I did not wait to ask questions, but dispatched him across the yard to the Hospital for the sulphate of zinc bottle, of which I administered to him a dose somewhat proportionate to the laudanum which he had taken. This was done with some difficulty, for he was rapidly falling into a lethargic sleep, though two soldiers were kept bumping and knocking him about, and a third belabouring him with all his might with a gun-string. This, with the addition of an immense quantity of hot water, and tickling the throat with a feather, at last with some difficulty produced vomiting. He was then taken out to the barrack yard in a state of perfect nudity, and run up and down in the snow between two grenadiers, while a third kept flogging him with a canteen strap, and the *other two dashing cold water over him*. This discipline was continued for about four hours, at the end of which time he was wide awake, and perfectly sensible. I then ordered him into a warm bath, and put him to bed in a state of perspiration. Next morning he awoke, with every appearance of a man who had been excessively drunk the night before. At first he had no recollection of what had taken place, but was gradually brought to his recollection by his comrades, and the corroborative testimony from the state of his back, from the discipline of the strap; but the nervous system had received such a shock, that it was several days before he entirely recovered from the lethargic state into which he had been thrown."

[This case is copied verbatim from Mr. Dunlop's MS. Lecture on Opium (now before me), which makes part of his Course on Medical Jurisprudence. EDITOR.]

*VENABLES' Clinical Report on Dropsies\*.*

We only know this author through a lecture which he pub-

\* Clinical Report on Dropsies, &c. with an Appendix on the Theory and Treatment of Organic Disease in general. By Robert Venables, B.M. &c. pp. 238. London, 1824.

lished a year or two ago on Oxalic Acid, and which we are sorry did him but little credit. A more miserable performance in every point of view we have seldom seen. This work on Dropsies, however, marks some improvement in his profession, as well as scholarship, but seems altogether to contain nothing very interesting or novel, though the author appears desirous of claiming originality. We shall probably examine it more at length hereafter.

TURNER on *Medico-Chirurgical Education* \*.

This seems to be a very excellent guide for students, in directing both the arrangement of their studies, and bringing their knowledge under scientific divisions. It may also be useful to those who are revising their elementary acquirements previous to examinations, &c. It is a pity, we think, that Mr. Turner did not comprise in his plan references to the best authors for more extensive details, than he has room to give on the several subjects of his Outlines.

DAWSON'S *Nosological Practice of Physic and Physiology* †.

This is a work displaying considerable talent and great research. It is excellent, useful, and practical, and we can strongly recommend it. But we cannot help suggesting that it is far too brief a performance for embracing the vast field of the Practice of Physic, as well as Physiology.

Dr. STOKER'S *Account of the Influenza*.—He commences by shewing the connection existing between the unusual severity of the season 1822-23, as proved by tables of the weather, and an increase in the number of patients admitted into the Fever Hospital, Cork-street, Dublin; together with an increase in the mean duration of the diseases, and in the average mortality. From the various forms which the epidemic assumed, he has been unable to affix any Nosological name to it which would be even generally applicable, and has therefore preferred adopting the popular term influenza. During November 1822, which he looks upon as the first month of its commencement, sickness was much more protracted than in the corresponding months of other years, though the average mortality was not materially affected by it. In December, however, diseases became more severe, and the joint effects of pectoral and hepatic complaints more urgent. Even at this time some cases presented them-

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\* Outlines of Medico-Chirurgical Education; containing illustrations of the application of Anatomy, Physiology, &c. [*with coloured plates.*] By Thomas Turner, M.R.C. Lecturer on Anatomy, &c. pp. 369. 8vo. London, 1824.

† Nosological Practice of Physic; embracing Physiology. By George Pearson Dawson, M.D. pp. 382, 8vo. London, 1824.

selves under a more formidable type ; these were dysentery and its accompanying remittent fever, hepatic or pulmonary disease ; and agues, which had been but little known in the hospital for several years, began to present themselves. January was marked by an increasing severity in the symptoms of the epidemic. Dysentery and remittent fever were very general ; and a still greater number of agues were found amongst those admitted into the Hospital. The texture of the viscera, especially of the lungs and liver, seemed to become more generally engaged than in the preceding months, when the mucous membranes chiefly were affected ; but now dyspnœa or the orthopnœa often indicated the deep-rooted injury done to the lungs ; and pain and soreness in the epigastric and hypochondriac regions, sometimes accompanied with jaundice, directed to the liver, as the chief seat of disease. The cases of catarrhal affections were sometimes attended with inflammatory symptoms, so urgent, as to demand the use of the lancet, but if unaccompanied by any symptoms of more deep-seated disease, the blood was seldom found buffed ; neither was the relief of pain and fever as great as generally succeeds bleeding, when employed for symptoms so apparently connected with inflammation. The severity of the weather and of the prevailing diseases arrived at its acme in January. Peripneumony and Dysentery were very general, and very obstinate in resisting the effects of remedies. The accompanying fever was generally of the remittent kind, and the remissions most remarkable on alternate days. The intermittents were mostly of the tertian type, and Dr. Stoker gives a favourable testimonial of the efficacy of the sulphate of quinine. Small-pox was more or less epidemic through the whole time that the influenza prevailed ; the frequency of its occurrence and the severity of its symptoms corresponding in like manner with the state of the weather.

“ In those,” says Dr. Stoker, “ whom I saw affected with it in this month (January), who had not been protected by inoculation or vaccination, it was confluent and often fatal, and even the vaccinated, as I am persuaded generally happens when small-pox is epidemic, were found less frequently protected now, and at subsequent periods of the influenza, than at other times. In some instances which came under my knowledge during the winter months, small-pox, after vaccination, was severe through its course, and left pitting after it ; but far more generally, in such cases, the benign influence of the antidote might be recognized in the mitigation of the symptoms from the commencement, or in the total arrest of the febrile symptoms, on the seventh or ninth days.”—p. 203.

Favourable crises, as in the former months, were at this time



preceded or attended in many cases, by the discharge of blood, or increase of the natural secretions from the mucous membranes; by pustular eruptions or small external abscesses in various parts, especially about the nose, mouth, and ears; the protracted and bad cases, however, often terminated in vomitæ or internal abscess, and in vascular effusion into the cavities, the occasional harbinger of a fatal conclusion.

Dr. Stoker conceives that there is good reason for supposing that the agency of the exciting causes of epidemic diseases commences in the fluids, either through the medium of external absorption, or of the different sources of supply to the circulating mass; he thinks also that this hypothesis will be found to be supported by many striking analogies, and will explain many phenomena, such as the general effects of changes in the atmosphere, on great numbers at the same time, the sudden disturbance connected with the suppression of exhalation from the surface, and of other secretions; the effects of bad diet, famine, &c. and in particular the agency of specific contagions. Dr. Stoker ceased to attend the Fever Hospital during the months of February and March. On resuming his duties in April, he found many cases there of the epidemic, nearly resembling those of pulmonary and hepatic disease, which had occurred in his private practice during the intermediate period. The catarrhal and dysenteric characteristics, which had attended the rise and progress of the epidemic, were still conspicuous in the months of April and May, whilst the weather was more than ordinarily severe. The dysentery, however, was in many cases chronic, and the catarrh in others had assumed the confirmed form of phthisis. After mentioning the continuance of small-pox, Dr. Stoker adds, that all the other sporadic diseases of the country, admitted at this time, were severe. Intermittents still occurred, with remarkable frequency, and the catarrhal and dysenteric fever was generally of the remitting kind. The epidemic, however, in these months assumed new features. These were the characteristics of the typhus of Ireland, denoting debility in every function; such as checked excretion and secretion, passive hemorrhage, dropsical and purpural effusion, &c. In the month of April whole families began to be brought in, labouring under the worst catarrhal or dysenteric symptoms of the epidemic, with those of typhus fever; the pulmonary, hepatic, and intestinal affections being combined with coma or delirium, tremulous voice and tongue, tremor of the extremities, &c.

In noticing the treatment, Dr. Stoker divides the epidemic into three periods, each of about two months, the whole comprising the time from November 1822, to May 1823. The first

of these periods he calls the catarrhal; the second the dysenteric; and the third the visceral and typhous. The treatment of the catarrhal cases appears to have been, in general, of the simplest kind; such as rest, avoiding external cold, and the use of additional clothing. Attention to diet, and rigid abstemiousness, especially in the use of liquids, was often serviceable, not only as a measure of prevention but of cure. Internal medicines were little needed, and the effects of evacuants, even when apparently indicated, suggested caution in their use. In dysenteric cases, the same remarks were in some degree applicable; but in these the preparation of ipecacuan and opium, either with or without mercury or antimony, were more useful, as were purgatives of oil of turpentine and of castor. Bleeding too was more generally indicated, and was productive of greater relief. Dr. Stoker has not given any very minute view of the mode of treatment in the third period, contenting himself with a reference to the general principles on which it was founded. He remarks that when the texture of the viscera, especially those employed in sanguification, was engaged, and when the buffy coat, particularly of the yellow and dense kind, was present, blood-letting, though a necessary adjuvant, was not alone effectual in relieving the symptoms.

We shall conclude this imperfect abstract of the very interesting medical history Dr. Stoker has given of the state of disease in 1822-23, by the following quotation, which certainly merits consideration:—

“Premising that it was my practice to bleed through every stage of the influenza, in proportion to the degree in which the inflammatory symptoms of any vital organ prevailed, I can positively affirm in the first place, that venesection was not in general so effectual in relieving such inflammatory complaints, as I have seen it at other times; and secondly, that in whatever degree the genuine symptoms of typhus were combined, in the same degree, these symptoms were injured by the operation.”—p. 232.

*Two Cases of Dyspnœa terminating fatally.* By M. ANDRAL, Junior\*.—Case 1. A baker, aged twenty, of strong constitution, who had been only two months in Paris, and had had a slight diarrhœa for five or six weeks, presented, on the 10th of April, and three succeeding days, all the precursory symptoms of measles, such as redness of the eyes, flow of tears, coryza, &c. On the 14th the eruption appeared, and the patient took to his bed. On the 15th it covered all the body, and in the evening the patient entered the Hospital. The eruption was then con-

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\* Revue Medicale. Sept. 1824.

fluent, and well characterized; the pulse quick and hard; the lips and tongue red; cough considerable; the symptoms not alarming. About the middle of the night the patient suddenly became oppressed; this oppression rapidly increased; and on the 16th, he was in a state almost amounting to asphyxia; his eyes prominent; face purple; respiration short and quick, and executed both by the diaphragm and the ribs; cough almost constant, with scanty mucous expectoration. The chest sounded well every where; mucous rattling was discovered in several points, by means of auscultation. The only traces of the eruption were some faint patches. The pulse remained quick and hard, and the tongue red. Twenty leeches were applied to each side of the chest, and ten to the epigastrium. A blister was afterwards put upon each leg, and the skin rubbed with a liniment of ammonia. Internally, ptisans. This treatment produced decided relief. In the evening, respiration was much more free, and the cough less frequent; the tongue was not so red; the eruption had not returned. On the 17th, the symptoms were only those of severe bronchitis, with fever. Respiration was but little quickened. 18th, the fever was trifling, and the opacity of the sputa indicated the speedy termination of the bronchitis. Suddenly, in the evening, respiration again became very difficult. Venesection to ʒxij. On the following morning the dyspnoea still remained considerable; the frequency of the pulse had increased. Two blisters to the thighs. During the day, the state of suffocation continued to increase. On the 20th, lividity of the face; purple hue of the lips; appearance of one dying with aneurism of the heart. Death soon after the visit.

*Dissection.*—The mucous membrane of the larynx, trachea, and bronchia, even to the smallest division, was intensely red. In some points of the primary divisions of the bronchia were a few white, membranous concretions like those of croup. The lungs were healthy, and crepitated throughout; loaded with blood at the back part. The heart healthy, with dark black coagula in the cavities of the right side; the stomach and small intestine pale; the lower part of the latter containing many lumbrici. The cæcum contained some thread worms; near the valve its mucous membrane presented a red patch, with three or four little conical excrescences; the rest of the intestine pale, and filled with fluid fæces. The liver loaded with blood; the spleen large and firm; much serum effused under the arachnoid membrane; the brain not injected; the lateral ventricles, particularly the right, distended by much clear serum.

*Case 2.*—A man, aged forty, had long had a very large ulcer on the left leg; the leg and foot below were prodigiously swell-

ed, and hard as a stone; the skin covering them of a dirty grey colour. The surface of the ulcer habitually discharged a considerable quantity of matter; for five or six months the patient had also had a cough, loose, and without dyspnœa, or pain in the chest. He was about to be transferred to the surgical from the medical ward, where he had, by mistake, been placed on his admission, when he was suddenly attacked with extreme difficulty of respiration, the secretion from the ulcer being at the same time much lessened. The patient, sitting up in a state of extreme anxiety, begged, in a broken voice, to be relieved from an enormous load upon his chest, which was stifling him: his inspirations were short, quick, and occasionally convulsive. The pulse was moderately frequent, and easily compressible. No cause for these formidable accidents could be detected in the state of the heart or lungs. The chest sounded naturally, except at the back part of the left side, for the space of some inches: and except this same place, where respiration was weak and rattling, the air freely entered the air-cells. The dyspnœa, the cause of which was thus so perfectly unknown, increased at every moment. Bleeding, blisters, &c., produced no relief. On the following day, the difficulty of respiration was so great as to threaten asphyxia. It was suggested that the cause might be in the larynx, and that the case offered some analogy to the œdema of the glottis. Tracheotomy was proposed as the only resource. M. Roux performed it: all precaution was taken that the air should have a free passage through the opening in the trachea, but the operation was not followed by any amendment. The oppression continued to increase, and in the evening the patient died.

*Dissection.*—The lungs were healthy and crepitated, except on the left side, in a space amounting to about one-tenth of the posterior lobe. The mucous membrane was red in patches of small extent. The heart and great vessels healthy. In the leg, great induration of the cellular tissue with necrosis of the tibia.

These cases are certainly of extreme interest. We have not space to admit M. Andral's remarks, a matter of less importance, as he expresses his utter ignorance of their real nature, and appears to consider them as extremely rare. It is impossible to avoid being struck with the analogy of the symptoms with those of what is called Spasmodic Asthma, and the morbid appearances, so far as they go, tend to corroborate the pathology of that disease, as explained by Dr. Parry (*Elem. of Pathology, and Therapeutics*, 1815.). They prove also the inadequacy of percussion and auscultation, to detect what may be called func-

tional disease, as distinguished from that which is the result of morbid structure. Lastly, it cannot fail to be remarked that the treatment, as far as it is noticed, was very imperfect. Those who are aware of the powers of medicine can alone estimate how small a portion bleeding, singly considered, forms in an efficient system of practice.

**THACKRAH on Digestion** \*.—This is a half popular, half professional work on one of the most interesting subjects in physiology. It shows the talents of the author in a very favourable light; and we only regret, that he has thought it necessary to be so brief on most of the topics which fall under his consideration.

**M. ZINC on the Danger of exhibiting Iodine**.—"M. Zinc has lately communicated two cases of fatal effects from the incautious use of iodine internally; and a third, in which unpleasant symptoms were induced, but they yielded to a proper treatment. In one case there were besides diarrhœa, priapism, tremors of the whole body, but especially of the arms; violent palpitations, and other nervous symptoms. The body was not opened. In the second fatal case, the symptoms are not detailed, but dissection exhibited violent gastro-enteritis and other traces of inflammation. These cases strongly confirm the remarks of Dr. Gairdner respecting the caution necessary in the exhibition of this medicine internally."

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## VII. MIDWIFERY.

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**Extirpation of the Uterus.** By PROFESSOR PALLETTA †.—A Piedmontese woman, who had had several children, was admitted into the Civil Hospital of Milan, in consequence of an ulcerated tumour at the head of the neck of the uterus, attended with sero-sanguinolent discharge. Suspecting that the disease was cancerous, Palletta resolved on extirpating it. On the 18th April, 1812, he introduced one hand into the vagina, and by means of it, applied separately the two blades of a spoon-shaped forceps, so as to grasp the tumour at its root. But as the base was very broad, and the body ulcerated and uneven, the forceps tore away before the cutting instrument could be applied. The hand was again introduced, the tumour again grasped, the upper part of the vagina cut through with a curved pair of scissors, and the tumour detached, partly with them, partly with a sickle-shaped knife. The incisions were guided by an induration which Palletta felt with the finger of the hand in the vagina, and which

\* Lectures on Digestion and Diet. By C. T. Thackrah, Esq. M.R.C. pp. 156. 8vo. London.

† Omodei Annali di Medicina, Ottobre, 1822.

he considered as the basis of the tumour. As soon as the tumour was detached, Palletta extracted it, and then removed a portion which still remained in the vagina. The operation was quickly performed, and the patient bore it well. The bleeding which Palletta had expected to be considerable, was not greater than in any common operation. The vagina, when examined by the finger, presented a large cavity: this was filled with soft charpie, sprinkled with an absorbing powder, and the patient put to bed.

After the operation, the tumour was examined in the presence of Palletta, Monteggia, and many assistants. To their very great astonishment they found that it was a smooth, round, and unwounded body, with a sarcomatous tumour projecting from it. At first glance it was evident that this body was the uterus, with its cavity, without the Fallopian tubes, which were cut away close to its surface, and without any trace of the vagina at its lower part. The body of the uterus was somewhat hard and enlarged, and evidently diseased.

Six hours after the operation the patient was easy, had not lost any blood, and merely complained of pain on coughing or deep respiration. On the following day there was convulsive shivering, with vomiting and pain in the abdomen. The countenance was not changed; there was a pale bloody discharge, and the pulse was weak. On the third day the vomiting, though less frequent, continued; the belly was not tense, but painful on the right side; the pulse soft and compressible. The patient became gradually weaker and died in the night.

On dissection the omentum was found covering the intestines and adherent to the peritoneum on both sides of the urinary bladder; the firmness of the connection was such as to shew that it was not recent. The upper part of the intestines about the umbilicus were slightly inflamed. There was considerable inflammation of the peritoneum on the right side, extending over the diaphragm, liver, colon, and jejunum, with an effusion of turbid serum under the liver, and on the concavity of the os ileum of that side. On raising the last convolutions of the ileum an opening and cavity were to be seen, from which the uterus had been removed, and which were about the level of the linea innominata: on the iliac edge of this opening were the Fallopian tubes, cut across, and a little inflamed. There were not any traces of extravasated blood in any part of the pelvis, and the bladder and rectum were perfectly sound. Professor Palletta concludes from the examination that a subacute inflammation of the membranous surfaces had previously existed, and that to this, aggravated by the operation, the effusion of serum and the fatal event of the case were both attributable.

*Case of Retention of Urine, combined with Anasarca.* By Dr. GIUSEPPE DE FELICI\*.—Maria Origgi, aged thirty-five, healthy, but of an irritable constitution, and mother of two children, supposed in December 1817, that she had become pregnant. She soon afterwards observed some swelling of her feet, which quickly extended to the thighs, pudendum, loins, and belly, and was accompanied by great thirst. On the 2d of February following, she was attacked with fever, sharp pain in the left hypogastric region, and numbness of the thigh on the same side, symptoms which were alleviated by various antiphlogistic measures. Meanwhile the thirst was insupportable, the œdema continued to increase, the tumefaction of the belly was enormous, the endeavour to pass urine so great as to cause pains resembling those of labour; the water escaping only by drops, *the difficulty of passing the stools extreme*, and the thigh so much enlarged as to render its motion, and that of the leg utterly impossible. With these symptoms were combined, incessant thirst, difficult respiration, emaciation of the upper extremities, dry cough; orthopnoea at night, a feeling of fluctuation in the chest, palpitation of the heart, quick, irregular pulse, &c.

The relator of the case, saw the patient in this state, and for the first time, on the 6th March. He hesitated between performing paracentesis, or introducing the catheter to ascertain the existence of retention of urine, which he suspected. He decided on the latter, and drew off from the bladder at once between thirteen or fourteen pounds of urine. The same quantity was evacuated in the course of the day by two repetitions of the operation. Digitalis and nitre were exhibited. On the morning of the 7th, sensible diminution of some of the symptoms, but no discharge from the bladder or bowels. The catheter was passed three times in the day. In the evening, the fever and thirst diminished; the pain in the hypochondrium (*quere hypogastrium?*) was almost gone; the motion of the thigh was much improved, and the œdema of the lower extremities diminished by one half. The medicine had produced nausea, and was omitted. On the next day the patient took a purgative, which operated several times. The same quantity of urine was drawn off by the catheter as on the 6th. About noon the patient miscarried, without any hæmorrhage, and the placenta was expelled on the following day. It is unnecessary to transcribe the remainder of the treatment, which consisted in emptying the bladder at short intervals, until the 31st of March, when the bladder had regained its powers.

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\* Omodei, Annali. Luglio, 1824.

We have laid this case before our readers, although it has made its appearance in other Journals in this country, for two reasons, first, because its true nature does not appear to have been correctly estimated either by the relator, or by Dr. Omodei, the Italian editor ; and secondly, because, on that account, we cannot agree with the latter that it does much honour either to the art, or to Dr. De Felici. The latter has called it a case of pregnancy followed by anasarca, and successfully treated by the catheter ; we believe, on the contrary, that few of our readers will be at a loss to recognize in the history of the symptoms a tolerably clear case of retroversion of the uterus, or will doubt that the favourable termination of it was in a great measure the result of accident. As it appeared in one of the Medical Journals in this country, it was rendered still more wonderful by an unfortunate blunder on the part of the translator, who does not appear to have been aware that the Italian word *Sciringa*, means catheter ; and accordingly sent it forth to the world in the truly puzzling shape of a case of anasarca succeeding to pregnancy, and cured by the SYRINGE ! !—*Risum teneatis.*

*Dr. Gooch's Mode of Treating Uterine Hæmorrhage.*

“ Since the publication of Dr. Gooch's paper, (12th volume of the Medico-Chirurgical Transactions,) on the hæmorrhage which sometimes follows the expulsion of the placenta and the contraction of the uterus, I have had an opportunity (says Mr. Crowfoot), in three cases, of witnessing the good effects of the preventive treatment which he recommends.

“ Mrs. G., in three previous labours, had suffered from a frightful hæmorrhage, which followed the expulsion of the placenta, after an interval, varying in the different labours, of from five to twenty minutes, notwithstanding the uterus had actively contracted. This patient having been again pregnant, I determined to try strict antiphlogistic treatment for five or six weeks prior to her confinement. The consequence was, that she altogether escaped the hæmorrhage.

“ Mrs. A., a lady of sanguine temperament, but delicate constitution, in her two first labours had rather more than the usual discharge after the removal of the placenta. In her third labour, the placenta was expelled as usual, the uterus actively contracted, and no hæmorrhage followed for at least twenty minutes, when a most appalling one burst forth, and was with difficulty restrained by the most prompt and continued treatment. In her fourth pregnancy, the antiphlogistic treatment was pursued as in the former case, and with the same satisfactory result.

“ In another patient, Mrs. L., similar hæmorrhage had occurred in two previous labours : in a third pregnancy, the antiphlogistic treatment prevented this inconvenience in the following labour.

“ In none of these cases did the hæmorrhage immediately follow the expulsion of the placenta ; an interval of from five to twenty



minutes intervened; and I therefore infer, that a degree of relaxation of the uterus preceded the hæmorrhage, and was as essential as the existence of the phlogistic diathesis. We find that the only remedies upon which we can depend in these cases, are such as have a tendency to produce firmer contraction of the organ—the sudden application of cold to the abdomen, steady pressure externally on the uterus, and the introduction of the hand into its cavity. Dr Gooch found that Le Roux's remedy could not be relied on; and the case which I detailed first, in which alarming hæmorrhage took place, into a uterus distended by a seven-month's fœtus and its appendages, would indispose one to trust to the plugging the vagina as a means of restraining a bleeding into a dilatable organ."—*Medical and Physical Journal*.

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### VIII. MEDICAL JURISPRUDENCE.

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BECK'S *Medical Jurisprudence*, by DUNLOP\*.

Our readers need not be told after the opinion which we have so repeatedly expressed, that this is a highly valuable work for reference and consultation. Mr. Dunlop has added a great number of original and interesting cases, many of which fell under his immediate observation, or were communicated to him by his friends, in order to enrich his lectures. In particular, we understand, that his distinguished relative, the present Lord Justice Clerk of Scotland gave him free access to his notes taken on the bench, from which source he has supplied several important Scots cases. We shall take an early opportunity of analysing those notes, as well as the parts of Dr. Beck's original work, which in our former review we could not overtake.

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### IX. MATERIA MEDICA.

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*Conspectus of Prescriptions*†.—This is a neat, very closely printed little volume, uniform with Thomson's *Conspectus of the Pharmacopœias*, but of a very different structure from it. In this are given arranged tables of doses, under the head of Alteratives, Antacids, Astringents, &c., followed by numerous formulæ, selected from the best professional authorities, English and Foreign, whose names are added to each prescription.

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\* *Elements of Medical Jurisprudence*. By T. R. Beck, &c. Second Edition, with Notes and an Appendix of original Cases and the latest Discoveries. By W. Dunlop, M.R.C. M.W.S. Lecturer on Medical Jurisprudence, Edinburgh, &c. pp. 620. 8vo. London, 1825, price 18s.

† *A Conspectus of Prescriptions in Medicine, Surgery, and Midwifery, &c. &c. including the New French Medicines, &c.* pp. 174. 18mo. London, 1825. price 5s.

Our readers, however, will understand the plan better by a specimen of the work, which we shall take from the 22d Section, the first that has opened to us.

“ XXII.—INJECTIONS

“ Are medicated liquors, to throw into a natural or preternatural cavity of the body, by means of a syringe, as in gleet, gonorrhœa, &c.

*Select Formulæ.*

INJECTIO COPAIBÆ.

R. Copaibæ ʒj.

Mucilag. gum. acaciæ ʒss.

Aq. rosæ ʒvj.

Rub the copaiba and mucilage well together, and add the rose-water.

HUNTER.

INJECTIO CUPRI SULPHATIS.

R. Cupri sulphatis gr. vj.

Aquæ distillatæ ʒij.

Tinct. opii ʒj.

Misce pro injectione.

ADAMS.

INJECTIO HYDRARGYRI.

R. Unguent. hydrarg. ʒj.

Olei olivæ ʒj.

Misce.

*This injection should be warmed previous to its use.*

LAGNEAU.

INJECTIO HYDRARGYRI SUBMURIATIS.

R. Hydrargyri submuriatis ʒij.

Mucilaginis acaciæ ʒss.

Liquor calcis oj.

Rub the submuriate and mucilage well together, and add gradually, the lime-water.

*In Inflamed Urethra.*

BLOOMFIELD.

INJECTIO PLUMBI CARBONATIS.

R. Plumbi carbonatis ʒj.

Tragacanthæ pulv. compos. ʒij.

Opii pulv. ʒj.

Aquæ ferventi Oj.

Misce.

*In the first stage of Gonorrhœa.*

LAWRENCE.

INJECTIO THEÆ.

R. Theæ viridis foliorum ʒj.

Aquæ ferventis ʒvj.

Macerate in a close vessel until cold, and strain.

*In Gonorrhœa.*

INJECTIO ZINCI SULPHATIS.

R. Zinci sulphatis ʒss.

Aquæ distillatæ Oj.

Misce.

CLARKE.

## INJECTIO OLEOSA.

℞. Ol. amygdalæ ℥iv.

Liq. plumbi subacetat. gutt. xxx.

Misce.

*In the inflammatory stage of Gonorrhœa.*

PEARSON.

## INJECTIO PLACENS.

℞. Aquæ puræ ℥iv.

Solutio vino. opii gutt. 40.

Misce.

*Idem.*

BOYLE.

## INJECTIO PLUMBI SUBACETATIS.

℞. Liq. plumbi subacetat. gutt. xx.

Aquæ rosæ ℥viiij.

Misce.

*Idem.*

BLANE.

## INJECTIO THEÆ COMPOSITA.

℞. Infus. theæ virid. ℥vj.

Liq. plumbi. acetat. gutt. xx.

Misce.

*Idem.*

GREGORY.

## INJECTIO EMOLLIENS.

℞. Infus. lini. ℥v.

Vin. opii gutt. xxx.

Misce.

PEARSON.

## INJECTIO AQUÆ CALCIS COMPOS.

℞. Aq. calcis ℥iv.

Ol. olivar. ℥ij.

Liq. acetat. plumbi gutt. xxiiij.

Misce pro injectione.

DUPUYTREN.

## INJECTIO SULPHATIS ZINCI.

℞. Sulphat. zinci ℥ij.

Aq. rosæ ℥viiij.

Misce.

HUNTER.

## INJECTIO SULPHATIS ZINCI COMPOS.

℞. Plumbi acetatis gr. xx.

Sulphat. zinci gr. x.

Aq. distillat. ℥viiij.

Misce pro injectione.

ADAMS.

## INJECTIO ALUMINIS.

℞. Aluminis ℥j.

Aquæ rosæ ℥iv.

Misce.

*In Fistulæ, Gleetæ, &c.*

CHESTER.

## INJECTIO SULPHATIS CUPRI.

℞. Sulphatis cupri gr. viij.

Aq. puræ ℥viiij.

Misce.

*Idem.*

COOPER.

INJECTIO COPAIBÆ CUM CALCE.

℞. Bals. copaib. ℥ij.  
Mucilag. G. Arab. ℥ss.  
Misce et adde. Aq. calcis ℥vj.  
Fiat injectio.

*In Ulceration of the Rectum, Urethra, or Vagina.* ABERNETHY.

INJECTIO OXYMUR. HYDRARG.

℞. Oxymuriat. hydrargyri gr. ij.  
Muriat. ammoniæ gr. x.  
Aq. distillat. ℥x.  
Fiat Injectio.

*In Gonorrhœa.* CARMICHAEL.

INJECTIO STIMULANS.

℞. Bals. copaib. ℥ij.  
Mucilag. Gum. acaciæ ℥j.  
Misce in mortario et adde.  
Tincturæ lyttæ gutt. xij.

MACGREGOR.

INJECTIO ACIDI MURIATICI.

℞. Aquæ distillatæ ℥jv.  
Acidi muriatici gutt. viij.  
Misce.

*In Gonorrhœa with Scalding Urine.*

WYATT.

INJECTIO CUPRI AMMONIATI.

℞. Liquoris cupri ammon. gutt. xx.  
Aquæ rosæ ℥jv.  
Misce.

*In Gonorrhœa.*

FOOT.

INJECTIO QUERCUS.

℞. Decocti quercus lbj.  
Aluminis purificati ℥ss.  
Misce.

*In relaxation of the Rectum or Vagina.*

COOPER."

We shall give you one other specimen, from the interesting Section on the New French Medicines.

"XXX.—NEW MEDICINES.

"In the preceding pages we have inserted a very few formulæ for the exhibition of the recently discovered vegetable alkalis, or as some choose to call them alkaloids; but as some of them have excited much interest, we shall give as full a list of them, in alphabetical order, as we could procure in the present stage of research. Our chief authority is M. Magendie, who has published a small work devoted to this subject, which has been translated into English, but in a form not very practical; as, instead of giving the apothecaries' weights and measures, the French are given with the corresponding troy weight, almost in every instance incumbered with decimal fractions.

ATROPINE,

"An alkali discovered by Brandes in the *Atropa Belladonna*, or  
VOL. II.

deadly night-shade, and retaining its narcotic properties. Atropine is white, and forms salts with the acids. It has not yet been used medicinally.

BRUCINE.

An alkali extracted from the bark of the *Brucea antidysenterica*, or false *Angustura*, and found also in *nux vomica*. It is intensely bitter, but slightly soluble in water, and on cooling takes the consistency of wax. It forms neutral salts with the acids. It is a narcotic, but about six times weaker than strychnine. The dose is from one to three grains.

PILULÆ BRUCINÆ.

℞. *Brucinae* gr. xxxvj.

*Conservæ rosarum* q. s.

Misce et fiant pilulæ No. xii. una pro dose.

*In Paralysis.*

DAUBUISSON.

TINCTURÆ BRUCINÆ.

℞ *Brucinae* gr. xvij.

*Alcoholis* (36°) ℥j.

Fiat tinctura, cujus sumantur guttæ sex vel triginta pro dose.

*In Muscular Debility.*

MAGENDIE.

MISTURA BRUCINÆ.

℞ *Brucinae* gr. vj.

*Aquæ distillatæ* ℥ij.

*Sacchari albi* ℥ij.

Fiat mistura, cochleare medium pro dose mane nocteque.

*Stimulant in Paralysis.*

DIEFFENBACK.

CATHARTINE,

An alkaline substance found by MM. Lassaigue and Feneulle, in the pods and leaves of senna. It is solid, yellowish brown, of a peculiar odour, and nauseously bitter. It is very soluble in water, alcohol, and ether. Not yet used medicinally.

CINCHONINE,

An alkali discovered by Dr. Duncan, junior, and found most abundantly in the grey Peruvian bark, or *Cinchona Condaminea*, though it is found in both the red and yellow bark. It is white, semi-transparent, and crystallizes in needles. Dissolved in water it has little taste, but is a strong bitter, dissolved in alcohol or acids, though less so than quinine, and it is also less powerful. It forms neutral salts with the acids.

SYRUPUS CINCHONINÆ.

℞ *Syrupi simplicis* ℔j.

*Sulphatis cinchoninæ* gr. xlvij.

Fiat syrupus: cochleare unum vel duo pro dose.

*In Scrofula.*

MAGENDIE.

VINUM CINCHONINÆ.

℞ *Vini Maderæ* Oiss.

*Sulphatis cinchoninæ* gr. xvij.

Fiat solutio—uncie quatuor pro dose.

*In Intermittents.*

MAGENDIE.

CINCHONINÆ TINCTURA.

R. Sulphatis cinchoninæ gr. ix.

Alcoholis (sp. grov. '847.) ℥j.

Fiat tinctura,—drachmæ duæ vel sex pro dose.

In Intermittents.

MAGENDIE.

CYTISINA,

An alkali found in the seed of the cytissus laburnum or pea-tree of our shrubberies, and supposed also to exist in Arnica Montana. It is bitter, and possesses emetic properties, but has not yet been used medicinally."

[We reserve the rest of the New Medicines for our next Number.]

X. MISCELLANEOUS.

DR. COPLAND'S NOTES TO DR LYS'S RICHERAND.

In our last Number we inserted a short notice of the Notes and Appendix furnished by Dr. Copland for Dr. De Lys's edition of Richerand's Physiology; why De Lys himself was not employed to edit his own work does not appear. Of the Notes, we gave an opinion, which has been considered correct and just by every person whom we have heard speak of the book; but it seems that we have unfairly endeavoured to deprive Dr. Copland of certain great and important discoveries which he has made respecting the Sympathetic and its ganglia. As truth and justice are our guiding principles, we shall therefore put our readers in possession of the claims of Dr. Copland in his own words.

"TO THE EDITOR OF ANDERSON'S QUARTERLY JOURNAL OF THE MEDICAL SCIENCES.

"SIR,—In your notice of the edition of M. Richerand's Elements of Physiology, edited by me, I observe the following remarks :—"The only subjects in this Appendix, not familiar to the readers of our Journal, are certain speculations of the Editor's concerning the ganglial nerves (a sort of echo of those of Lobstein, whose name is not mentioned,) and a few other subordinate subjects," &c. To this I reply, that every opinion respecting the functions of the ganglial nerves, contained in the Appendix to Richerand, was given in a paper on the subject, which was read at the Medical Society of London in September, 1821, as the records of the society will testify; indeed, what is published in my Appendix is given avowedly as a transcript of the paper then read to the society. In the Number of the MEDICAL REPOSITORY for May, 1822, I also published an outline of my opinions respecting "the Functions of the Ganglial Nerves, in Health and Disease;" a part of this outline I have also given in the Appendix in question, stating, at the same time, that it is a quotation from the REPOSITORY of the date just now mentioned. This your reviewer must have seen, provided that he read what he professed to review. Here are facts

of which your reviewer may satisfy himself in three ways—1st, by referring to the records of the Medical Society; 2dly, by looking at the Number of the MEDICAL REPOSITORY for May, 1822, which contains my paper, many of the ideas in which have since been avowed by Lobstein; and, 3dly, by referring to the Appendix itself.

“Again, Sir,—Lobstein’s work was published, at Paris, in the end of the year 1823 (mark the dates); was imported by Treutell and Wurtz in the beginning of 1824; and reviewed almost immediately in the London Medical and Physical Journal for March of this year, when I first obtained a knowledge of its existence. In this review, the editors of the Medical and Physical Journal very candidly referred to my paper in the REPOSITORY, as containing similar opinions to those espoused by M. Lobstein.

“In addition to this evidence, I may also state the impossibility of my having derived a single idea from Lobstein, even had I not published so long previously to him, as I have now shewn; for my edition of Richerand, although not published until the end of May, was nearly all printed six months before; and that part of the Appendix was entirely printed off before a single copy of Lobstein’s work had reached this country. How, then, could I have mentioned M. Lobstein, when I could not be aware that he was writing on the subject?

“Thus, Sir, the fact is incontrovertible, that my speculations were published at first three years, and afterwards nearly two years, before the appearance of any thing from M. Lobstein on the ganglial nerves. So far, therefore, from having adopted the opinions of M. Lobstein, he has adopted mine: indeed all his opinions respecting the functions and diseases of this class of nerves may be found in the papers previously published by me. My ideas as to the nervous system have been entertained during many years, and as far back as the years 1817, 1818, and 1819, I have had occasion to discuss them with several medical men in different parts of the Continent. The outline of them, which I gave in May, 1822, in the REPOSITORY, led me about that time into several private discussions with some of the most eminent physiologists of this country, who are able to testify the long period which elapsed between these and the appearance of M. Lobstein’s work. But it is to the authenticated dates of publication that I refer. Other proofs are unnecessary.

“Your reviewer says that he is not able to comprehend some of my opinions. I am sorry for it. He surely cannot expect that I should furnish him both with ideas and capacity to comprehend their relations.

JAMES COPLAND.”

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We give Dr. Copland all the benefit he wishes to derive,

from the dates he has stated; but we may be permitted to remark that the paper read to the Medical Society cannot, in any sense of the word, be considered as published; and the paper published in the Repository was nothing more than the titles of Chapters and Sections, as may be seen by his own quotation, in the Appendix to Richerand, page 578. What he has mentioned respecting the time of printing his Appendix, and the arrival of Lobstein's work in this country may be all correct to a day; but Dr. Copland is not, we should think, prepared to say that his Preface was printed off in March, and not published till the end of May: if so, his publishers are not the active men of business we have known them to be. If then, as Dr. Copland himself acknowledges, the work of Lobstein interfered so evidently with his claims as a discoverer—why did he not mention it in his Preface, or in an additional note at the end of the Appendix? The name of Lobstein, on the contrary, is nowhere to be found in any part of the work so far as we have examined it. This is, to say the least of it, a very singular omission.

There are other <sup>s, b</sup> names not mentioned in this part of the work to which we may call Dr. Copland's attention—such as Bichat, Reil, and Richerand himself, in the very work on which he was commenting—to whom we can clearly trace almost every fact and inference which Dr. Copland claims as original. We have examined the facts and the deductions from them with some care, and we have come to the conclusion that there is not in Dr. Copland's notes on the ganglial system a single fact or a single inference of the least importance which may not be found in the authors we have named, and most of them in Richerand himself, but particularly in Bichat. The only difference we can see in Dr. Copland's paper is the parade of propositions, numbered from 1 to 40, and which it was an easy matter to make up.

The truth of the system is no less questionable than its originality, as it sets out with a series of "false facts," see page 571, Propositions, 1, 2, 10, &c. We beg leave to call Dr. Copland's attention to the following luminous refutation of these propositions, by Mr. Charles Bell.—

"Bichat persuaded himself that his ganglionic system was isolated and a thing by itself, when, on the contrary, the connections of this part of the nervous system are universal. The wide-spreading fifth pair, and thirty spinal nerves, give large and conspicuous roots to this system. It exhibits a tissue extending universally.

"It was a still more unfortunate mistake of this ingenious physiologist, to suppose the sympathetic nerve to be the same with that, which, in the lower animals, (the vermes) is seen coursing from one extremity of the body to the other. In the leech, or worm, those nerves pro-



duce union and concatenation of all the voluntary motions, and bestow sensibility as well as motion; yet he saw in the sympathetic system of the human body, only the development of the same system of nerves, although he was aware, that in man, the sympathetic nerve neither bestowed sensibility nor the power of motion.

"Bichât announced his system with a popular eloquence, which had a very remarkable influence over all Europe. Physiologists yielding to him, mistook the importance of the several parts of the nervous system; and even the multiplied experiments of Le Gallois failed to convince them of the nature of the spinal marrow."—MR. C. BELL'S *Expos. of the Nerv. System*, Page 384.

The fundamental proposition of this theory of Bichât (adopted and claimed as his own by Dr. Copland), being thus overthrown by a single remark of the first physiologist of the age, the rank which Mr. Charles Bell holds, we think, without a rival—we hope that Dr. Copland will take more time to mature the next important discovery, with which he may favour the world.

Dr. Copland says we cannot expect that he should furnish us "both with ideas and capacity to comprehend their relations." We have no such expectations indeed; for after the cavalier manner in which he has treated his readers, and *intentionally* left them in the dark till he see meet to publish a Commentary on his Notes—Reviewers could have little gratuitous courtesy to hope for. "The office of an Annotator," says Dr. Copland, "has not permitted him to bestow that copiousness of illustration on his own views which many may consider them to require: *this will be attended to on ANOTHER OCCASION*"!! It may be remarked that this work is chiefly intended for students; what, therefore, are we to think of this unparalleled piece of prefacing? We give one specimen of what we call the *incomprehensible*, selecting it chiefly on account of its shortness, as we have already taken up too much time with the subject.

"Sympathy," says Dr. C. "may be considered to be that state which an organ or texture presents which holds a certain relation to the condition which characterizes another organ or texture; in health or in disease: or it may be viewed as a certain relative state of the vital power, as it exists in separate organs or textures; as when one part is excited another participates in the change, and evinces a similar feeling, motion, or function." *Richerand*, page 35-6 *Note*.

If this is not "darkness visible," we know not what can be called so. We should be sorry indeed to have a "capacity to comprehend" this, and many other things of a similar kind, in Dr. Copland's Notes.

ANDERSON'S  
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ART. I. *Elements of Medical Jurisprudence.* By THEODRIC ROMEYN BECK, M.D., *Professor of the Institutes of Medicine, and Lecturer on Medical Jurisprudence in the College of the Western District of the State of New York, &c. &c. Second Edition, with Notes, and an Appendix of Original Cases and the Latest Discoveries.* By WILLIAM DUNLOP, *Member of the Royal College of Surgeons, London; of the Medico-Chirurgical, and of the Wernerian Society of Natural History, Edinburgh; and Lecturer on Medical Jurisprudence, &c. &c. 1 Vol. 8vo. pp. 620. London, 1825.*

WE congratulate our readers upon the appearance of this admirable work in an English edition, which may be considered superior, in some respects, to the American one, from being enriched with many valuable notes by Mr. Dunlop, the well known Lecturer on Medical Jurisprudence. Of a work which has embodied in itself almost all that was previously worth knowing on the subject; a work so elaborate in its execution; and so copious in its references, we cannot speak too highly; and we advise every member of the profession to add it to his library. We hope soon (probably in our next Number) to finish our review of it; but, in the mean time, we shall make Mr. Dunlop's notes the subject of the present article.

*Feigned Diseases.*—The first notes of the Editor are on feigned diseases. Some persons have been able to conceal the pulsation of the radial artery; and in such cases it behoves the physician to examine the other arteries of the body.

"I have seen a gentleman," he says, "who, by the exertion of the muscles of the arm and thorax, could stop the action of the pulse at the wrist, but in so doing he required to call into action all the muscles of the arm, so that should a *malingerer* attempt this, the cheat would easily be discovered by feeling the arm above the elbow. There was a preparation in the Museum of Mr. Alan Burns, and which, I believe, is at present in the possession of my friend, Mr. G. S. Pattison, of Baltimore, United States, where a slip of muscle passed across the humeral artery, and impeded its action. On inquiry being made, it was found that the subject had been a servant girl, and though strong and healthy in other respects, she could never, for any length of time, pump a well nor switch a carpet."

So that in some cases it may be a natural defect. The detection of those persons who pretend to pass sand with their urine, is not difficult; as they generally, in their impositions, use such substances, as never were, nor could be, excreted from the bladder; for instance, Mr. Dunlop mentions a woman who, in the Glasgow Infirmary, used pounded coals for the purpose of deception. Artificial ulcers, also, have frequently been excited with astonishing perseverance and address; and the Editor mentions a soldier, who boasted to him of having obtained his discharge, in this way, from six different regiments.

"In the York Hospital," he says, "in the years 1812-13, we had many cases of this kind from the Peninsula, and were obliged to lock up the leg in a wooden box, prepared for the purpose, in order to secure ourselves against the patient tampering with the sore."

At Sheerness, in the convict hulks, ulcers were not long ago occasioned by a process termed, in the flash language, *fox hunting*; which consisted in rubbing in the shin bone with the thumb, the sand used for scouring the deck. The propensity to the disease was cured by flogging.

Some men, Mr. Dunlop informs us, have shown considerable dexterity in producing the appearance of a febrile paroxysm. This is done by scrubbing the skin with a hard brush, previously to the physician's visit; and in the General Hospital, at Chatham, the practice of exciting the action of the heart was lately carried to a great extent. This was done by taking fifteen grains of hellebore for a first dose, and four grains daily, afterwards. One man killed himself by taking an over dose. The practice was introduced by a fellow who had been servant to a veterinary surgeon.

Speaking of artificial fits, Mr. Dunlop says:—

"A case is related of a country boy, who feigned epilepsy to avoid work. A surgeon was called, who suspected the deceit, and observed to one of the bystanders, that if it was a true fit, as he thought it was, the patient would turn round on his face, and bite

the grass; this he did, and so betrayed himself. On occasions of this kind, it is proper to examine the mouth for soap, which is easily done by pressing the cheeks against the grinder teeth. I once saw a pseudo epileptic in Edinburgh recovered by the simple expedient of calling a police-officer."

Nostalgia is sometimes counterfeited; and then, it is said, the patient, contrary to the real nostalgia, expresses a great desire to visit his native country. We once saw the disease in a soldier, who frequently begged to be sent home, even till within a few days of his death. He died of *tabes mesenterica*. Mr. Dunlop seems to be surprised at having met with the disease in a lad from the fens of Lincolnshire, and in one who had been a London pick-pocket; but, probably, it is neither beauty of situation, nor salubrity of climate, but the memory of past enjoyment, or the hope of future pleasure, that fascinate the sufferer in nostalgia.

Mr. Dunlop has known a person, who feigned deafness, have such command over himself, that he did not seem to notice the report, when a pistol was fired close to his ear; but when the same experiment was tried, after he had been put to sleep by opium, he started out of bed.

"Foderé says," as the Editor remarks, "that a good way to detect pretended deafness and dumbness is to say something deeply interesting to the patient in his presence, and mark the effect it produces on his countenance. Whether the *great unknown* has studied Foderé or not, it is impossible to determine; but he illustrates this admirably in *Peveril of the Peak*, where Fenella betrays herself on hearing that Julian is assassinated."

The great unknown, however, is too well acquainted with all the workings of the human mind, to need the assistance of Foderé, or that of any other man, in describing what is natural to it.

*Disqualifying Diseases.*—Mr. Dunlop observes that the army has become by far too nice in the selection of recruits.

"Large, broad, or splay feet, for instance," he says, "are, at present, inadmissible; a regulation which amounts almost to a virtual exclusion of the inhabitants of the Highlands of Scotland from His Majesty's service, a service of which, according to themselves and Colonel David Stewart, of Garth, they are so exclusively the ornaments."

Of this passage, reflecting in some degree on a meritorious class of men, we cannot but disapprove; and yet we solemnly declare that we have not a single drop of Highland blood in our veins. It is not, we believe, the only instance in the Volume, in which the Editor shows Anti-Celtic feelings.

We have next some remarks on the *early pregnancies* of warm countries, when girls of eleven years of age are sometimes mothers; and how heat, whether in an Eastern bagnio, or a European cotton-mill, inflames the passions. We have next, on the subject of a recent foetus being found in a sink, a curious anecdote of the sagacity of a Northern parish priest, by which the mother was very readily detected, and found guilty of concealment of pregnancy. On the disputed point of the *corpora lutea*, the Editor observes:—

“A recent case has, in my opinion, completely overthrown the theory, that even strong passions are necessary to the formation of the *corpora lutea*. My friend, Dr. M’Intosh, lecturer on midwifery, in Edinburgh, has in his Museum a preparation taken from the body of a child, which he, in company with Dr. John Scott, dissected at Piershill barracks. The subject was not above five years old, and the hymen of course was entire. She died of tubercular disease in the lungs; yet in her ovaries were numerous *corpora lutea*, as distinct as I ever saw them in the adult impregnated female.”

As in some degree exculpatory of concealment of pregnancy, the Editor has favoured us with the two following cases:—

“While lecturing,” he observes, “on the subject of concealment of pregnancy, in the winter of 1823-4, I received the following extraordinary case from my friend Dr. M’Intosh:—I was consulted about a married lady in the Spring of 1822, who was supposed to be in a very bad state of health. She had been attended by Dr. —, and treated for an affection of the spine and dropsy. The husband of the lady grew impatient, as she became daily worse, and the abdomen more and more distended. He sent for the family-surgeon, who suspected it might be pregnancy, attended with peculiar nervous irritability, and recommended that I should be called in to examine more particularly. Accordingly I waited on her, and as she sat in her chair the nature of the case became perfectly clear, as I distinctly perceived the motion of the foetus. This I mentioned, but the lady scouted the idea. I warned her to get baby-linen and dresses ready, which she did not do: so convinced was she that she was not pregnant. In six weeks afterwards, I was suddenly called, and found the patient in labour; and, to demonstrate, in the clearest point of view, that she had not believed that she was in the family-way, no nurse was engaged, nor had any thing in the shape of dress been prepared for the child. I told her she was now in labour, but she would not believe me. Upon examination, I found the os uteri open, the membranes protruding, and I distinctly felt the head of the child. The waters broke; still she would not believe. The pains increased;—the head of the child was born, but she would not credit her actual situation till she heard the child cry, and it was put into her arms. Both mother and child did well, and I am engaged to attend the mother a second time, in Nov. 1823.”

"The other case," says Mr. Dunlop, "I should be afraid to state, but that I had it from a gentleman of unquestionable veracity. The wife of an officer of a Scotch militia-regiment had long been married, without having a child. One day, while bathing her feet in her bed-room, her servant heard the cries of a child; she rushed into the room, and found her mistress lying back in her chair in a swoon, and a new-born infant struggling in the tub at her feet. She raised the child, and both it and the mother did well. In this case, neither the lady nor her husband had the slightest suspicion that she was pregnant."

On the subject of infanticide, we do not find that Mr. Dunlop has advanced any thing new or striking. It may be observed, however, that the surgeon or midwife who, by mechanical means, shall procure abortion, though not liable by the statute law of England and Scotland, to the punishment of death, will be condemned, in the latter country at least, to fourteen years transportation. For the administering of drugs, for the purpose of abortion, the punishment in both countries is death.

On the subject of *identity*, particularly that of dead bodies, we extract the following note, though more applicable to juries than to gentlemen of the medical profession:—

"When witnesses," says Mr. Dunlop, "swear to the identity of a dead person, unless their *causa scientiæ* consist in scars, tattooing, or other indelible marks, their evidence should be taken with the greatest possible caution by the jury; for very soon after death such a total change of the features takes place, that it is impossible for the nearest relations to recognize them. This is finely illustrated in a case tried before the high Court of Justiciary in Edinburgh last Winter, (I quote from memory, having no documents.) A resurrection-man was tried for raising the body of a young woman from the church-yard of Stirling: nine weeks after death, the body was discovered and identified by all the relations, not only by the features, but by a mark which they believed could not be mistaken, she being lame of the left leg, which was shorter than the right. There was a good deal of curious swearing as to the length of time after death, that the body could be recognized, but the jury were convinced that the *libel was proven*, and gave a verdict accordingly. Now I am certain that this was not the body of the woman who was taken from the church-yard of Stirling, but one that, at least six weeks after the time libelled, had been buried in the church-yard of Falkirk, from which she was taken by this man, who also took the other, for which he was tried; she also was lame of the left leg: thus, though guilty of the offence laid to his charge, he was found guilty by a mistake of the *corpus delicti*."

**Mental Alienation.**—We now come to the subject of mental alienation. It has been often feigned; and in this case, if the feigner is a person of ability, it may be difficult of detection.

"The best mode," says the Editor, "that has yet been discovered for forcing a man who feigns madness to confess and desist; is by the use of the whirling chair, that is, a chair placed upon a spindle, which revolves upon its own axis, and is turned by a wheel and crank, with the rapidity of the fly of a jack; it produces nausea even to syncope, and after two minutes of such discipline, few men can command spirits sufficient to act any part. It was by this means that M'Dougal, of Glasgow, was rendered sane when he feigned madness, to avoid being tried for sinking ships, to defraud the underwriters; but he betrayed himself to the medical men by the common fault of impostors, not having 'a method in his madness,' but mixing up the two irreconcilable characters of 'The moping idiot, and the madman gay.'"

Dr. Beck having, with great simplicity, mentioned from Zachias, the feigned madness of Ulysses, Solon, and Brutus, Mr. Dunlop has archly observed that he might have mentioned King David also, "when his hand was in." But from the able manner in which Dr. Beck has written on the subject of insanity, the Editor has had little opportunity of shewing his research.

*Persons found Dead.*—In the circumstance of a person being found dead in Scotland, a law officer makes an immediate and ample investigation of the case; and no suspected person is committed to prison, Mr. Dunlop informs us, without sufficient evidence. In that country, the office of coroner is not known.

The rules to be observed in the examination of dead bodies, must be drawn from many different sources. In addition to the authors quoted by Dr. Beck—

"Very excellent rules," says Mr. Dunlop, "for the dissection of bodies for practical purposes, will be found in an *Essay on the subject*, by M. Renard de Chalon, published at Paris in 1819, and bound up with some other *Essays on legal medicine*; and also in the instructions of Mr. John Shaw, of the Great Windmill-street Anatomical Theatre, as laid down by him in his *Manual for the student of anatomy*."

We may mention also the late work of M. Chaussier, reviewed in this Journal. Every part of the body should undoubtedly be examined.

"A learned Professor," says Mr. Dunlop, "in a certain Northern University, gave his pupils a very different advice; 'When,' said he in his lectures, 'you find any appearance sufficient to account for death, rest satisfied with that, and inquire no further; as further examination will only tend to embarrass your evidence, and render it contradictory.' We have all heard of a worthy country justice, who made it a rule never to hear both sides of a question, because, when he only heard one, he could decide without hesitation; but hearing both only puzzled him."

Of the modes of *suicide*, that which is done by a handkerchief

tied round the neck, and twisted with a stick, has been thought to be barely possible; and our readers will recollect that in one of our late Journals, Chaussier is rather sceptical on this point.

"A Navy surgeon," says Mr. Dunlop, "a friend of mine, related to me the case of a Malay, who, on board of a man of war, in the East Indies, had made repeated attempts to commit suicide, and at last succeeded by the means alluded to in the text. He tied a handkerchief round his neck, and with a small stick twisted it several times, and then secured it behind his ear to prevent its untwisting. Jealousy was the cause assigned for the act."

On the natural *combustion of the human body*, Mr. Dunlop has given the case of the blacksmith, in France, who lately began to burn, and could find nothing powerful enough to quench the flame but *holy water*.

*External Injuries.*—The uncertainty of prognosis in wounds of the head is well known. A trifling wound is often fatal; while another of a dreadful aspect will terminate favourably in a short time.

"A soldier," says Mr. Dunlop, "got drunk on the line of march, and was put into a baggage waggon, out of which he fell, his head coming right in the track of the wheel, which passed obliquely over it, stripping the whole of the integuments off one side of it, and leaving the bone completely bare. The integuments were replaced and secured by stitches, and the whole kept *in situ* by means of bandages. He travelled for four days on the waggon, when he was put into the hospital, and in less than a fortnight was able to resume his duty."

Such cases are by no means uncommon. We could give several which have fallen under our own notice. A slight injury inflicted on the eye has often caused death; while, at other times, that organ has been destroyed without danger to the patient. Of the latter, Mr. Dunlop gives the following instances:—

"Mr. Liston, of Edinburgh," he says, "related to me the case of a man who, while blasting the roots of trees, had a splinter driven into the eye, which from its length must have passed through the foramen opticum, and penetrated into the brain. Mr. Liston removed it long after, and the man recovered."

The Editor has also made some remarks on the bad effects which follow blows on the nose; and he observes that death may ensue from the wound of an artery of the cheek, where the bystanders have not presence of mind to apply pressure with the finger and thumb.

"Wounds," he says, "of the artery sometimes cut in dividing the frenum of the tongue, are easily commanded by squeezing the divided end in a cleft twig covered with lint."



Wounds of the trachea, and œsophagus, of which Mr. Dunlop has given some interesting cases, are for the most part fatal; but simple wounds of the trachea are often cured. Nor are wounds, which have penetrated from one side of the thorax to the other, necessarily mortal: there are numerous cases of recovery from such wounds on record, and the Editor has given an extraordinary one from his own practice. Even wounds of the heart are not instantly fatal; though there is no instance in the human species of a recovery from such a wound.

"A case," says Mr. Dunlop, "was tried in Glasgow, in the year 1819, of which the following is an outline:—

"The keeper of a house of bad fame, in Greenock, was indicted for the murder of a sailor, by shooting him through the chest. It appeared from the evidence of the medical witnesses, that the auricles and part of the aorta, next the heart, were shattered to atoms by the slugs and brass-nails with which the piece was charged, and in their opinion he must have dropped down dead the moment he received the shot; therefore, as the body was found in the street, and the door of the house was eighteen feet up an entry, it followed that the prisoner must have run after him into the street, and there shot him. For the prisoner, it was urged and proved, that he had shot him through the door of his own house, which he was attempting to enter by force; and besides direct testimony to this effect, from those within the house, and from a lad who was along with the deceased at the time, it came out in evidence, that there was a stream of blood from the door of the house to the spot where the body was found, which could not have run from the body towards the house, as the threshold of the door was on a higher level than the pavement of the street. On this evidence, the prisoner got a unanimous verdict of acquittal.

"By the practice," he observes, "of the Scotch courts, if one man kills another by a blow on the stomach, the fact of his having done so is construed into malice, or what amounts to the same thing, *recklessness*, as it is termed."

A very slight injury also of the intestines may occasion death. Even the omentum, if long protruded, will inflame and become gangrenous.

"A strong illustration of this fact," observes Mr. Dunlop, "was related to me by a medical friend. A peon, or messenger, was brought to him in India, who had received a stab in the side three weeks before, through the wound of which the omentum had all that time protruded. On examination, he found that the viscus was adhering to the wound all round, and that inflammation had commenced without, and been communicated to the interior of the cavity. Gangrene supervened, of which he died in a few days after.

When persons have been killed by falling from a great height, the liver frequently is lacerated; and this, Mr. Dunlop remarks,

was the case in every one of three soldiers, who were killed by a fall from the rock of Edinburgh castle.

Wounds of the kidney have been recovered from by proper management.

"There are instances," however, "of death arising from slight blows on the kidney, where it contains a calculus. A gentleman in India was tried for the murder of his servant, whom he killed by a blow on the loins; on it being proved that the kidney contained a calculus, the ragged points of which had punctured the blood-vessels, he was acquitted."

Effusions of bile, urine, fæces, and chyle, prove uniformly mortal. They

"Are highly irritating in their nature; and though, which is very doubtful, we were enabled to remove them from the cavity, we should find it impossible to command the wounded gall-bladder, biliary duct, kidney, ureter, or intestine, from which they proceed, so that the operation would only be inflicting pain, without any rational hope of success, as they would be renewed as fast as they were removed; and as for blood, unless the puncture was made instantly, it would most likely coagulate, and in that form it would be impossible to get it through a small punctured hole;—making a large incision is, of course, quite out of the question; and blood, if like to find its way out at all, will do so by the hole through which the wound was inflicted."

Death may ensue after a wound has been inflicted, from mismanagement, or from previous depravity of constitution.

"There was," says Mr. Dunlop, "a very interesting case came on before the Justiciary Court, during the autumn circuit, at Glasgow, in the year 1822. A man of the name of Pace, game-keeper to Lord Blantyre, was tried for the murder of a poacher, whom he shot so severely in the left arm, that it was found necessary to amputate it above the elbow. The man died of erysipelas phlegmonoides in the right leg, and the question on the trial was, whether the erysipelas was brought on by the wound or not. Upon this question the medical men differed totally. Mr. John Burns, the most eminent surgeon in Glasgow, gave it as his opinion, that the debility caused by the wound brought on the disease of which he died. Dr. John Thompson, of Edinburgh, was of opinion, that it was brought on long before he received the wound. It appeared in evidence, that the poacher had been out in the exercise of his vocation for two nights, and had slept without shelter; that during that time he had eat but little; and, above all, that he had a foul ulcer in his leg, the absorption from which undoubtedly laid the foundation of the disease before the injury was received. Under all these circumstances, what would have been the best mode of treatment in such a case, supposing he had received no wound at all? Undoubtedly, the very treatment he did receive in consequence of it—copious bleeding, light diet, being kept quiet and still; and the

counter irritation of the amputation, so far from increasing the inflammation which was going on in the groin, must have acted like a blister, or a seton, in repressing and counteracting it. This appears to me to be the rational view of the case, and in this view the jury saw it, for the prisoner was acquitted."

From the mismanagement of a luxation, a person may become lame for life.

"There was," says the Editor, "a case of this kind recorded some time ago in the newspapers, where the plaintiff, a gentleman, who had been upset in a coach, recovered 800*l.* damages against the defendant, a surgeon, for unskilful treatment of a dislocation of the shoulder-joint, by which the plaintiff was partially deprived of the use of his right arm. In all similar cases, almost a similar verdict would be just; for though there may be exceptions, yet, generally speaking, permanent lameness, after a luxation (unless from disease of the bone anchyloses have taken place after it is put in its proper position) may be fairly attributed to mismanagement on the part of the surgeon."

But were such an accident to prove fatal, it would, very probably, be owing to a bad habit of body, or to the pre-existence of some irritating disease.

On the tests of arsenic, we think it right to extract the whole of Mr. Dunlop's note, as it shows that the subject by no means rests on such a sure foundation as many persons have imagined.

"Dr. Christison, Professor of Medical Jurisprudence in the University of Edinburgh, has published, in the *Edinburgh Medical Journal*, for July, 1824, a very erudite paper on the detection of minute quantities of arsenic in mixed fluids, and has scrutinized all that has been said on the subject with great minuteness. The paper is so closely reasoned, that it cannot be easily abridged; but when we find Dr. Christison asserting, that 'the more compound mixtures in daily use, as articles of food or drink, affect the precipitates so much as to render the liquid tests absolutely useless;' and 'that the very same precipitates are often produced in these composite fluids, whether arsenic be present or not;' and again, 'that some of the tests will indicate arsenic where none exists, while others will fail to detect it where it does exist; nay, that a person who follows faithfully one of the processes recommended, may, in some circumstances, fail altogether to discover the poison, where it is, nevertheless, present in considerable quantity;' a practitioner would be certainly culpable in giving such evidence as might bring a panel's life into danger, without minutely weighing these objections of Dr. Christison, and without repeating the experiments upon which they are founded.

"Dr. Christison prefers the test of metallic reduction, after producing a precipitate by means of sulphuretted hydrogen gas, as he thinks he has proved that neither of the tests proposed by Mr. Hume,

Long-acre, viz. the ammoniacal sulphate of copper, nor the ammoniacal nitrate of silver, 'is of any use in the greater number of vegetable and animal fluids,' p. 78.—because they precipitate so much animal or vegetable matter with the arsenic.

"Medico-legal authors," says Dr. Christison, "have recently manifested a propensity to underrate the force of evidence derived from the reduction of arsenic." Dr. Smith, in particular, p. 104, says, 'Perhaps all that the majority of medical practitioners could swear to, would be, that some metallic substance was incrustated on the glass.' Dr. Christison thinks it almost impossible to mistake in this case, as mercury sublimes in sparse white globules—zinc requires a full white heat to sublime it—tellurium, potassium, and cadmium, besides being very different in appearance, are of too rare occurrence to enter into our consideration; and antimony and bismuth cannot be sublimed by the process for reducing arsenic."

We have thus extracted, for the consideration of our readers, a fair sample of Mr. Dunlop's labours. His notes are certainly creditable to his industry; but it was no easy matter to write a Commentary on the work of so distinguished an author as Professor Beck, who has concentrated in himself the medico-forensic wisdom of the present, and of every preceding age.

ART. II. *Practical Remarks. Part I. On Acute and Chronic Ophthalmia, Ulcers of the Eye, &c. &c. Part II. On the Remittent Fever, viz. Simple and Complicated.* By THOMAS O' HALLORAN, M.D. 8vo. pp. 156. London, 1824.

Dr. O'Halloran, already known to the profession by his *Treatises on the Yellow-fever Epidemics of Barcelona and Andalusia*, has treated ophthalmia in England, Ireland, France, Spain, America, and the West Indies; and he now writes to condemn blood-letting, low diet, long confinement, and the exclusion of light and air, in that disease, and to recommend the local application of *blue-stone*, and the lunar caustic solution. He tells us, that the greatest part of his information on the subject of disease, has been drawn from observation in the 64th regiment.

The cure of ophthalmia is often a matter of great difficulty to the military surgeon, on account of the impaired constitution of his patient; a circumstance which the civil practitioner, in his estimate of the other's labours, has too commonly overlooked. Indeed, the latter, in curing soldiers who had been discharged

as incurable, has too often attributed to his own skill, what, in reality, native climate had effected.

In treating of the inflammatory stage of this disease, Dr. O'Halloran mentions three varieties of it, which, however, he thinks, are but modifications or degrees of the same affection, as they all yield, if attended to in proper time, to the same means of cure.

"The first variety of this disease, as it appeared in the 64th regiment, exhibited redness of the conjunctiva, and lining membranes of the eye-lids. The lachrymal discharge, if at all increased, was increased so inconsiderably, as scarcely to deserve notice. The tumescence of the vessels of the conjunctiva and upper eye-lids, was slight. It conveyed an imperfect idea of sand interposed between the membranes. The vision was little, if at all, affected.

It commonly yielded to simple remedies in a few days; and relapses were much less frequent than in the other varieties.

In the second variety, the attack is sudden.

"The first symptom which attracts the patient's attention is an increase of the lachrymal secretion, which, as it becomes abundant in quantity, flows over the cheeks, the ducts being incapable of removing it in the usual manner. If the upper lids be examined at this time, although the covering membrane of the ball be free from disease, a villous flocculence is there discernible; even sometimes a thickening, approaching to what is commonly called granulation, chiefly observable towards the inner angle, though occasionally over the whole of the eye-lid. It was this state of the eye-lids (and it in many instances precedes the explosion of the disease on the ball of the eye,) which chiefly directed my attention to the plan of treatment hereafter to be noticed. A thickening of the upper no sooner takes place, than the lower eye-lids become villous and slightly prominent. The sensation of sand, if not synchronous with the thickening of the lining membrane of the upper eye-lid, now becomes unpleasant; the patient imagining that the disagreeable feeling he experiences is owing to the lodgment of an extraneous body, between the palpebræ and ball of the eye. As the sensation of intervening sand increases, the watery discharge also increases; and, soon becoming acrid and corrosive, produces a degree of pain, which obliges the patient, unaccustomed to the irritation, to seek relief from friction, the act of which produces redness of the sclerotic coat, and conjunctival membrane, followed by distention of innumerable small vessels. The Meibomian glands, previously in a state of irritation, now increase in size, and discharge a fluid proportionate to their enlargement."

The greater the tumefaction and hardness of the lower eye-lid, the more difficult is the cure, in this form of ophthalmia. The secretion of serum is wonderfully increased, and there is

often a defect of vision, from the great quantity of it which is poured into the anterior and posterior chambers of the eye.

The third variety (the purulent) is comparatively complex ; but probably it is not, in reality, more dangerous than the second.

“ In this form also the attack is sudden, not announced by premonitory symptoms ; when they do exist, they consist, as in the other form, in a sensation of stiffness or heaviness about the orbits—an inability to move the eye with the accustomed freedom. The eye becomes itchy ; and the patient cannot be persuaded but that sand or dirt, as he expresses it, is lodged between the eye-lid and ball of the eye. He endeavours to remove the disagreeable sensation by rubbing ; which, not producing the expected relief, is immediately succeeded by obtuse pain, augmentation of the sensation of heaviness, and by a flow of fluid resembling tears ; which, from being thin and watery at first, is converted into a puriform matter, wholly divested of the acrimony attending the serous discharge, in the second form. If the eye-lids be now examined, a thickening of the lining membrane of the upper is observable, and the lower are villous. As the puriform discharge augments, it becomes dense and tenacious : the capillary vessels on the ball of the eye, and neighbouring parts, are in a state of irritation. This is considerably augmented by rubbing the ball, and the propensity to rub is irresistible. The vessels which nourish the conjunctiva and lining membranes, pour forth a matter of a puriform nature, whilst those of the eye-lids internally, and also of the internal parts of the eye, secrete and discharge a quantity of whey-coloured serum, producing a tumified state of the eye-lids, and of the ball of the eye, which characterize the disease, and occasion the partial or total loss of vision.”

Dr. O'Halloran will not allow that purulent ophthalmia has any connection whatever with the matter of gonorrhœa.

The first of these varieties, though in its outset it was occasionally simple, sometimes assumed an alarming character ; the second was irregular in its proceeding, and extremely treacherous ; but the third was generally regular in its course, and when proper means were employed, a cure was speedily obtained.

“ It may be necessary,” says Dr. O'Halloran, “ to remark, before I enter upon a detail of the plan of cure, that I consider ophthalmia in every form to be a local disease, dependent for its production on general causes, which augment the vascular action and secretions of the eye and neighbouring parts, in a similar manner as the secretions of the nasal cavity, &c. are increased during the prevalence of the catarrhal affections ; to which, I think, ophthalmia bears considerable analogy.”

The following was the plan of cure :—The patient was con-

fined to bed, in a large airy ward, from which light was not excluded.

"He was placed on the spoon scale of diet, was purged with calomel and colocynth, and afterwards with salts. The upper eye-lids were examined; and whatever the appearance might be, whether villous, thickened, &c., blue-stone, in substance, was rubbed over the surface, for a longer or shorter time, according to the condition of the membrane. If the eye-lids were thickened, as was often the case, or in a state which oculists call 'granulated,' as occurred sometimes, the passing of the blue-stone over the surface was continued for a considerable time: if the appearance was only villous, a superficial and short application was sufficient. The application of blue-stone to the surface of the everted eye-lid is attended with acute pain, and on one occasion has produced syncope."

The author affirms, that in his hands this has been a remedy superior to every other hitherto employed. Its application, both to the upper and lower eye-lids, should be followed by fomentations, to be repeated four or five times in the twenty-four hours. By the second day, every symptom will be alleviated.

"A change for the better having been thus effected in a few hours, and danger, in such instances, obviated, it will be well; if the application of the remedy had been only superficial and transient, on the first day, to repeat it on the second; but if it had been severe, and if the slough adheres to the lining membrane, as often happens, where there is great debility of the parts, from over distention of the vessels, it will be well to instil a solution of lunar caustic into the eye in the morning, in the proportion of ten grains to an ounce of water, and to repeat the fomentations, as on the preceding day. A solution of lunar caustic, of the above strength, is an excellent remedy in this disease. It may be used at all periods, and, next to the blue-stone, claims a preference to all others."

It is an admirable auxiliary to the blue stone, in a severe or protracted disease; and Dr. O'Halloran prefers the solution which contains ten grains to an ounce of water. On the second day, he usually gives a purge of Epsom salts, and in the evening, occasionally uses the lunar caustic solution, or the blue-stone, to the lower eye-lid, again repeating the fomentations. On the third day, the same practice is followed.

"Under this plan of treatment, varied according to circumstances, more than eighty of one hundred will recover, without the use of other means; and it may be presumed, that, in consequence of the attention which is paid to the upper eye-lids, the condition which is commonly, but improperly, called 'granular,' will be prevented; relapses, although frequent, will be comparatively fewer, than where the antiphlogistic plan is pursued; and ulcers, so common where copious bleeding is employed, will seldom appear; and when they

do appear, they are of a mild kind, and rarely imply much loss of substance."

Our author next gives a case illustrative of the practice, which it is not necessary to detail, as it only serves to show the infinite superiority of the *blue-stone* practice, to the antiphlogistic one. The patient is generally confined about a week; a short period, compared to the confinement of the advocates of depletion; and besides, which is a matter of no little moment, abridges in an extraordinary manner, the labour of the practitioner.

It is necessary to observe, however, that when deep-seated and acute pain, denoted internal disease, blood was abstracted by means of leeches; and afterwards fomentations were applied. The relief obtained was generally temporary. But, at the same time, with the bleeding, powerful astringents must be applied to the diseased part, as they make the collapse of the blood-vessels permanent, which would be otherwise but of temporary duration. Dr. O'Halloran is persuaded that ophthalmia, in its native form, is a disease of little danger, if "the patient be placed in a *healthy situation, to which air and light have free access.*" The loss of vision, in nine cases out of ten, he thinks, has not been owing to the disease in its own nature. When, therefore, active inflammation is induced from over-distention of the organ, or any other cause, the disease is changed.

"For the removal or cure of this condition, it will be necessary to bleed largely from the arm; and we must here have recourse to the most rigorous means of depletion. If the bursting of the coats of the eye be apprehended from over distention, puncturing the cornea will not only afford relief from pain, but give hope that the disease may be ultimately cured; a circumstance which could not be expected if the evacuation of the fluid be suffered to take place by the forcible rupture of the cornea."

Blisters, our author disapproves of, as he generally found that this increased the local irritation to a great degree. Where they are judged necessary, they should be applied on some distant part.

Pustules or ulcers, forming on the eye at the junction of the Conjunctiva with the cornea, should be touched with lunar caustic.

In ophthalmia, in our author's opinion, it is difficult to fix a precise limit to the two stages, acute and chronic. In the acute,

"The action of the arteries is inordinately increased, while that of the veins is stationary or diminished;" and "upon the relative degrees of action in both, depends the nature of the discharge. In chronic ophthalmia, on the other hand, although a state of activity exists in the trunks of the arteries, the blood is torpid in the minute branches; whilst a near approach to stagnation takes place in the



veins, external as well as internal. In this case, as well as in the former (*viz.* the acute), the discharge of fluid from the eye is considerable; for the glands, whose action is augmented according to the increase of disease and size, emit a fluid in quantity considerably exceeding, perhaps, that which is poured out in the acute stage. If we apply caustic or blue-stone to the upper or under eye-lids in the chronic ophthalmia, so as to produce a slough, the vessels, being destitute of power, are unable to throw it off in less than from three to six days; whilst in the acute stage, where the arteries are possessed of high action, the same quantity of slough is ordinarily removed in one night. This is a fact of practical importance. It furnishes us with the means of ascertaining, whether the case before us be of the acute or chronic character; and no injury can result from the experiment, for blue-stone is equally serviceable in both stages; in addition to this, we also find, that when the disease assumes the chronic form, the veins on the upper eye-lids, forehead, and temples, are gorged with blue blood, and as they appear wholly destitute of activity, the blood which they contain is in a state of demi-coagulation; the arteries, also, of the ball of the eye, are inordinately distended, and hard to the touch; they appear destitute of the powers of propulsion."

Dr. O'Halloran will not allow that granulations ever exist on the eye-lids of ophthalmic patients, and he thinks that nothing can be more injurious than the use of the knife or scissors, for the removal of what has been taken for granulations, and which are simply enlargements of a fungous nature, from the glands and vessels. The glands here mentioned, he thinks, are much more numerous than is commonly imagined; and their enlargement is sometimes the cause, and not the effect, of what is called inflammation. These, united to partly obliterated and over-distended vessels, are formed into a mass, which often acquires a firmness unknown in granulated surfaces.

Chronic ophthalmia, at times, is a disease of difficult management, at least, till the irritation subsides, which, in the author's opinion, is often brought on in the army by unfair means. Be that as it may, whenever the disease of the eye-lids assumed a protracted course, the upper eye-lids became thickened and diseased; and as long as this continued, so long was inflammation observable on the ball of the eye and inferior eye-lids.

"For the cure of the thickened state of the eye-lids, commonly denominated 'granular,' it will be necessary to apply blue-stone, in substance, daily, provided the irritation produced by it is of temporary duration; but should it occasion unusual pain, *which rarely happens*, it will be proper to instil on the following day, a solution of lunar caustic into the eye, of the strength of ten grains to an ounce of water, and to foment three or four times in the twenty-four hours. Where blue-stone disagrees, (which is seldom the case,)

and the fomentations are, unavailing in allaying irritation; or the lunar caustic drops possess but little efficacy against the disease of the eye-lids, recourse may be had to lunar caustic in substance, which, when slightly rubbed over the internal surface of the upper or lower eye-lids, frequently removes the irritation, and sometimes even cures the disease."

The caustic, in substance, when applied so as to produce a deep slough, generally did harm; therefore, as its use is merely to diminish irritability, the slighter its application the better. Sometimes, a respite of its employment for a day or two is advisable, the parts being kept clean with warm or cold water. Dr. O'Halloran thinks he has saved eyes by the caustic, where it had previously done harm.

"There are periods," he observes, "when active remedies should not be applied, and that period appears to be, principally, when lymphous effusion is about to take place on the cornea; when, in consequence of the very great irritation which accompanies that process, we ought simply to bathe the eyes in hot or cold water, and attend to the state of the bowels. After the irritation subsides, which generally happens before the termination of two days, it will be necessary to have recourse to the sulph. cup. and caustic solution, in those cases in which it arises from effusion, in order that an impression may be speedily made, so as to prevent a recurrence of the morbid changes, which, as they may be expected in these cases, should be guarded against, as far as our means and skill permit."

When caustic, or blue-stone in substance, makes the eye-lids bleed, it should be discontinued. When the disease has left the upper eye-lid and ball of the eye, a spongy state of the lower lid not unfrequently remains, and resists the most active treatment. Here blue-stone, rubbed severely on the part, and change of air and diet, have been beneficial. Relapses will occur, even where the cure has been perfect.

"The preventive measures against relapse consist in the occasional application of blue-stone to the eye-lids, during the period of convalescence; and, for this purpose, it would be desirable to confine the convalescents to a separate barrack-room, where, when off duty, the eyes may be examined, with the view of maintaining an excitement in the eye-lids, when a disposition to relapse manifests itself."

In hospitals, there is an ophthalmic air, very prejudicial to the chronic state.

"It is astonishing," continues our author, "how quickly the state of the eye-lids, denominated 'granular,' is removed by the blue-stone, if the subject be not of scrofulous habit, or the eye-lids spongy, watery, or covered with fatty dry lumps. In the latter

case, the knife will be necessary for the removal of the tumours ; after which, a solution of blue-stone will complete the cure. *The case in question is the only one in which, in my opinion, the knife is admissible to the internal surface of the eye-lids.*"

Such is the substance of our author's observations on ophthalmia. The application of sulphate of copper (blue-stone) in that disease is not new ; but it is our duty, notwithstanding, to state Dr. O'Halloran's views upon the subject.

"Blue-stone," he thinks, "has the same effect in this disease, as arsenic or Balsam of Peru have on foul ulcers ; it rouses a new action in the vessels of the part, and thus cures the disease."

He has used a variety of other remedies, both general and local, with little or no effect, and in some instances, with disadvantage ; particularly mercury, given so as to induce salivation.

Dr. O'Halloran has here contraverted several of the statements of Mr. Travers ; but upon those points we have not room to enter.

He next favours us with some practical remarks on ulcers of the eye, and on lymphous effusion. His theory of the formation of ulcers on the eye, we must pass over in silence ; but shall extract his observations on the mode of treatment.

"When an ophthalmic patient," he says, "whose eye is ulcerated, is confined in impure or stagnant air, it is impossible to remedy the evil by treatment. Medicine is of little or no avail ; but removal to a pure atmosphere has a sudden and striking effect upon the character of the ulcer ; so striking indeed, that, independent of treatment, I have no hesitation in saying, that to an impure atmosphere, and want of ventilation, many of the lamentable effects, which occur from this disease, in large cities in northern latitudes, are to be ascribed. We find, that some authors recommend the patient to be kept in a dark apartment ; and not only that the light, but even the air be excluded. This practice produces much evil."

"Ulcers on the globe of the eye seldom or never appear, except where the upper eye-lids are implicated ; and, whatever might have been the duration of the disease, in addition to the slight application of caustic to the ulcer itself, I conceived that the use of blue-stone to the eye-lids was necessary ; and I have the satisfaction to say, that the good effect was generally evident in less than twenty-four hours. On the next day, whatever might be the state of the ulcer, I dropped a strong solution of caustic into the eye, and repeated it in the evening. Under the alternate use of the sulph. cup. and solut. nit. argent. (viz. ten or twenty grains to the ounce of water), if the air of the ward was pure, the diet proper, and the state of the bowels well regulated, the ulcers generally healed in a given time."

If the ulcer is obstinate, it must be touched lightly with the caustic in substance. At other times, Dr. O'Halloran has di-

vided the arterial trunks which communicate with the ulcer; and after fomentations, has touched them with a piece of pointed caustic. Warm fomentations were subsequently employed at times through the day.

Lymphous effusion seldom appeared in the early periods; but in advanced stages, it was generally observed at the superior margin of the cornea, whenever unusual irritation suddenly took place. It was a dusky-coloured, jelly-like substance, and was discharged from a congeries of vessels. It descends till it reaches a given point, to which it seems to adhere. When its course is slow, it seems to be gradually pushed forwards in layers. It covers, sometimes, the whole circumference of the cornea. The cure of this affection is difficult. Topical blood-letting, lunar caustic solution, fomentations, &c. Dr. O'Halloran informs us, were of no avail. In some cases, he applied caustic in substance to the effused lymph, and to the trunks of the vessels which poured it out, and thus arrested the disease. In such cases, it is necessary to attend to the eye-lids.

We now come to the second part of our author's practical remarks, that which treats of REMITTENT FEVER.

"It may be viewed under two forms; namely, the simple, active, and progressive; the complicated, torpid, and congeative. In the simple form of remittent fever, the onset is generally marked by slight pain of the abdomen, which the patient frequently attributes to the drinking of cold water, or to some other trivial cause. This is succeeded by general uneasiness, drowsiness, depression of spirits, giddiness of the head, and not unfrequently by nausea. These feelings are soon followed by cold and chilliness, or fixed or flying pains in the back and loins; or where the sensations of cold and pains in the back are not noticeable, by violent headache, nausea, vomiting, and frequently pain in one or other of the organs within the abdominal cavity. The pain of the abdomen, which is so obscure at first, that the patient can scarcely point out its actual place, increases after the cold stage, which generally continues from three to eight hours, has subsided. The head aches, and there is sometimes a sense of tightness about the eyes, with pain and redness of the ball of the eye, and intolerance of light. The countenance, which was sad, dull, and what may be called abstracted, during the tumultuary stage of invasion, becomes flushed, clouded, and distressed with a peculiar expression of weariness not easily described. The tongue is clean during the first stages; it ordinarily changes after a short time, and becomes foul and white; it is sometimes slimy and yellow, sometimes rough, dry, and brown, and in some instances, not perceptibly different from natural. The heat is sometimes ardent, at other times inconsiderable. The salivary secretions are diminished more or less, sometimes almost suspended. There is a bad taste in the mouth, with

loathing of food. The stomach is generally irritable; anguish or acute pain, considerably augmented on pressure, is commonly felt at the præcordia. The abdomen is frequently distended, impatient of pressure, and painful to the touch. (Some of the abdominal contents are invariably affected in this disease; the intestines, if I may judge correctly, are more commonly implicated than the other viscera.) The bowels are constipated; when otherwise, the evacuations are watery, corrosive, and excoriating, sometimes of a bilious green, or blackish colour. The urinary discharge is diminished, sometimes nearly suspended; the colour of the urine is always high; the skin is sometimes dry and constricted, even parched; the impression that it makes on the hand which touches it unpleasant, as pungently irritating; sometimes it is greasy, damp, and clammy. The pulse generally ranges between seventy and eighty; I have observed it as low as twenty-five; it is frequently under forty, full and expanded, seldom constituting what may be called a febrile pulse. Transient, or fixed and deep-seated pains in the lower extremities, are common in this form of disease."

Such are the symptoms which characterize the period of invasion, and the immediate subsequent excitement. They subside at the remission, which is generally noticed in the evening, but they do not disappear; they, however, undergo a change about the twenty-fourth hour, all these becoming milder, and a gentle moisture breaking out on the surface, particularly of the upper parts of the body. In a short time, if preventive measures were not speedily resorted to, every symptom became aggravated. This second stage proceeds to a similar termination as the first; and so moves on the disease, till death or a favourable crisis terminates its progress. These symptoms are seen in their most distinct form, in persons of the sanguine temperament.

"Remittent fever is, for the most part, a disease of short duration, when properly and decisively treated; but when palliative measures only are employed, it runs a protracted course, and it terminates, not unfrequently, in dropsy or visceral obstruction. Yellowness, black vomiting, hæmorrhages from the nose, mouth, &c. are not uncommon in this form of disease, where depletion is not carried to sufficient extent, during the incipient stages."

Signs of crisis are rarely clear and unequivocal, under judicious treatment; but salivation, where calomel has been used, indicates the ostensible subsidence of the febrile process. Critical periods are observed, when the disease has been left to nature.

Every thing shows, that the fever is of an inflammatory character; and it is a very destructive one, when its action is directed to abdominal organs, essential to life. Its proximate cause, as Dr. O'Halloran imagines, consists in an unusual impulse of

blood, directed upon a part or a series of parts ; it would appear, therefore, that blood-letting is the remedy most essential to its recovery.

"It will, however," says our author, "be proper, as a means preparatory to blood-letting, that the patient who labours under this disease be immersed, at admission into the hospital, into a warm bath of high temperature, and that he remain in it fifteen or twenty minutes, or until the whole of the body be perfectly cleansed from impurities, by means of soap, coarse cloths, or flesh-brushes ; and when this is done, that he be carefully dried and put to bed. A vein is then to be opened in one or both arms, and the blood allowed to flow until the pulse manifests a decided change in its condition, or until fainting supervene from actual loss of blood."

Blood-letting is here culogized in the strongest manner by Dr. O'Halloran, who seems to have carried it at times to an appalling length (four pounds at once, even in an apparently emaciated subject) ; but he does not think that it will alone, without the other remedial means, remove fever. When the head is much affected, and the pulse strong and full, the patient should be bled in the recumbent posture.

"Until a change for the better be evident in the state of the pulse, or until syncope supervene ; after which, a brisk cathartic, composed of calomel and jalap, or the compound extract of colocynth, is to be administered immediately, followed by a solution of salts, with infusion of senna, at an interval of two hours ; to which may be added such a quantity of the liquor ammoniæ acetatis, as may act on the skin, while the purgative acts on the bowels."

If these medicines are slow in their effect, glysters must be administered, and an additional purgative given. After this, if the stomach is very irritable, a large blister should be applied over the epigastric region, and effervescing draughts should be given frequently. If the headache return, after free evacuations, we must apply blisters to the temples, and betwixt the shoulders, and use cold lotions to the head. In the evening of the first day, the warm bath may be repeated ; and if the inflammatory symptoms are still strong, the lancet must be again employed. On the second day, or even earlier, calomel and James' powder, in the form of pills, five grains of the former to three or four of the latter, may be given every second hour, and will be found a valuable remedy. It keeps the bowels open, without producing the distressing purging, which is so often the effect of drastic medicines when improperly administered, and besides, by its operation on the system at large, it produces a most salutary effect on the constitution. Of course vomiting must be checked by effervescing draughts, or spiritus Mindereri, with

tincture of opium. For the same purpose, our author recommends weak solutions of superacetate of lead, and sulphate of zinc.

"It not unfrequently happens," he observes, "on the second day, notwithstanding every attention has been paid to the measures which have been recommended, that the bowels are affected with flying or fixed pains of the most distressing kind, causing an extraordinary change in the countenance of the patient, which, from being animated, becomes sad and dejected; the pulse contracting, and general restlessness, attended with tenesmus of the most harassing nature, sets in. In such cases, and they are of frequent occurrence, the patient is benefited by fomentations to the abdomen, anodyne enemata, and frictions of the abdomen, with hot stimulating oils; but the medicine upon which we are to place our principal dependence, is *castor oil*, which seems to possess peculiar efficacy, in removing this alarming affection. I have known patients, in multitudes of instances, to have been tormented by pain of the abdomen for hours, and which had resisted a variety of applications, instantly relieved by a dose of castor oil."

In pains of the bowels, threatening enteritis, we have found admirable effects from the same medicine, where it was given in repeated doses, so as to procure very free evacuations; and even in cases where, from hepatic congestion, calomel or the blue pill has, in general, been judged absolutely necessary.

Our author now makes some remarks on the employment of calomel and James' powder, in conjunction, as the propriety of the union has been doubted. After the use of the lancet, he has always found it succeed wonderfully.

"I believe," he says, "the beneficial operation of this medicine may be partly ascribed to its action on the skin and bowels, and partly to the peculiar effect of mercury on the hepatic system, and even on the system of general secretions."

It is, however, the real powder of Dr. James, and not the antimonial powder of the London Dispensatory, to which he alludes, for he looks upon the last as good for nothing; and in this opinion he is not singular.

We shall finish this part of the subject with a passage, which, after our author's warm eulogium of blood-letting, will appear, perhaps, a little surprising to the reader.

"Venesection, as I before observed, has a decided superiority over the remedies which have been recommended for the cure of remittent fever; and next to venesection, the combination of calomel and James' powder alluded to, claims, when judiciously administered, the practitioner's attention. I have of late, for experiment, depended solely on the latter remedy for the cure of this disease; and the symptoms of organic congestion and general febrile

excitement have, in most cases, undergone a change for the better, when the system became affected by the mineral, after which the patient rapidly convalesced; but although I am satisfied that the disease, generally speaking, is completely under the control of this remedy, yet I am disposed to think that relapses are more common, and chronic visceral diseases more likely to occur, under this mode of treatment, than when the lancet is freely employed in the early periods."

Dr. O'Halloran now ends the subject of simple remittent fever, with the opinions of Jackson, Johnson, and Burnett, on blood-letting in this disease, and with a few cases illustrative of his own practice.

We now proceed to that kind of remittent fever, which our author has termed the complicated, torpid, and congestive.

"It is characterized throughout its whole course, especially when the termination is fatal, by partial or general deficiency of vital heat and vascular energy, impaired sensibility, diminution, in some cases almost to privation, of muscular power."

It has many points of resemblance to the *fibræ algidæ* of authors. Dr. O'Halloran has given a lengthened, and apparently, a very accurate description of its different stages. We must give only a faint sketch of it. The patient is instantly attacked with severe shivering, the pulse at the wrist is scarcely perceptible, there is nausea and vomiting, and often considerable confusion in the mental faculties. These symptoms are alleviated about the eighth hour. Now there is severe headache, the eye is red and painful, the face and lips are of a deadly paleness, the temperature of the body invariably below the healthy standard, the vomiting becomes much severer, the pulse varies, but in general it is depressed. The ideas are confused, and at times, there is high delirium. About the twenty-fourth or forty-eighth hour, these symptoms are succeeded by a shaking fit, which lasts from one to six hours, and which, without the intervention of a hot stage, often forces out a cold clammy sweat. The countenance is now grim and overcast, there is a peculiar malignity in the eye, the pulse is irregular and intermitting, and the body exhales a disagreeable odour. The danger is always in proportion to the number and intensity of the cold fits.

When the disease has appeared in the above aggravated form, and has so lasted for two or three days, universal reaction seldom or never takes place. The progress towards dissolution is then extremely rapid, all the symptoms become worse, and convulsions or coma terminate the scene. Death generally happens before the fifth day; but, by active measures, the disease may be protracted to a longer period.



"When the disease terminates favourably, febrile excitement appears at an early period, and the type becomes purely remittent, in the same manner as in the simple form, into which it may be said to be converted. The conversions are reciprocal, the simple form sometimes assuming the congestive; and the congestive, on the contrary, sometimes resolving itself, as it were, into the simple."

This fever, we are told by Dr. O'Halloran, is extremely difficult to manage. The principal indication of cure, is to restore heat and animation to the surface; and before this happens, the use of the lancet is prejudicial, except in rare cases, where the head, it may be presumed, is the seat of congestion. But when reaction has at length taken place, the author is disposed to look upon venesection as the most valuable of remedies.

"It is principal," he observes, "as subtracting the impulse from the diseased organs, reproducing balance in the circulating system; and it is moreover auxiliary, as rendering the system susceptible of the impression of remedies, which are calculated to restore a form of action analogous to that of health."

The first step, therefore, is to restore heat.

"For the accomplishment of it, it will be necessary to place the patient in a hot bath of high temperature, and to detain him in it until the body be thoroughly warmed; he should then be rubbed dry, and covered in bed with more than the usual quantity of clothes. When he is disposed in bed, a purge of calomel and colocynth should be administered immediately; and if the heat of the body be not increased before the termination of two hours from this time, the conjoint use of pills composed of calomel, opium, camphor, and ammonia, with brandy, æther, or stimulating tinctures, should be repeated at short intervals. If these means fail in producing artificial excitement, massive pieces of wood, heated to a high temperature, should be applied to the sides—heated bricks to the feet, and bladders of warm water to the stomach and abdomen."

In this way, artificial fever may be induced; but if not, the bath should be repeated, and the most powerful stimulants administered at short intervals. If the stomach is too irritable, blisters should be applied to the head, epigastrium, &c., artificial heat must be employed, and friction with hot stimulating oils. On the establishment of reaction, the abstraction of a small quantity of blood will be beneficial; which may be repeated, if circumstances are favourable.

"After the first bleeding, it will be prudent to give one scruple of calomel with camphor and opium, which may be repeated three times a-day, either by itself, or with effervescing draughts, especially if irritability of the stomach prevail.

"When general febrile action is securely established, and the heat,

which is equally diffused over the whole surface, is above natural, the abstraction of blood to considerable extent, will be followed by benefit. It will then be proper that calomel, camphor, ammonia, and opium, be given every two hours, with a view of supporting action, counteracting the immediate effects of the lancet, and of affecting the system by the operation of mercury. Where the system is under the impression of mercury, the symptoms of topical congestion subside rapidly in most cases, and the disease assumes the simple form, soon followed by convalescence."

The author concludes the Volume with a few cases of congestive remittent fever, and an Appendix of remarks and cases on fever from inebriation; on continued fever; and on the bilious remittent, as they occur in Gibraltar. In all of them, the treatment is nearly the same as that we have been already noticing: the warm bath, blood-letting, purging, &c. &c.

We now close our analysis of Dr. O'Halloran's remarks. In so far as we have observed, he is a faithful delineator of disease. His practice, however, in the simple remittent fever of the Mediterranean, in so far as blood-letting is concerned, is not new; for we well remember, that at Minorca in 1801, in fevers of this type, Mr. Gray, of the Naval Hospital at Masion, trusted almost entirely to the lancet for their cure; and Dr. Irvine, in 1809, made it the ground-work of his practice, in the summer and autumnal fevers of Sicily. We acknowledge, that we have never seen the congestive remittent, as described by him, in its worst form; but we have met with fevers similar to that described by Dr. Farrell, in Irvine's *Diseases of Sicily*, which we believe to be of the same family. Most of Dr. O'Halloran's cases occurred in summer and autumn, probably from fatigue and exposure to the sun's rays, or from alternations of diurnal heat, and nocturnal cold; but he has said little about causes.

The execution of the work, which is written in a simple and unaffected style, is creditable to Dr. O'Halloran's literary talents. We have, indeed, observed a few, and but a few, passages, that might have been carped at, but they are not worth mentioning. The passage, however, in lines 13, 14, 15, page 60, might have been made more intelligible.

ART. III. *An Inquiry into the Causes of the Curvature of the Spine, with Suggestions as to the best Means of preventing, or when formed, of removing, the Lateral Curvature.* By T. JARROLD, M.D. 8vo. pp. 147. London, 1824.

The diseases of the spine have been recently treated of by several authors, of whose works we have endeavoured to convey some idea to our readers. The discrepancy of opinion which prevails among them, is of itself sufficient to shew, that we have not yet obtained any principles in the pathology and treatment, which can be considered as fixed, or of general application. In fact, we are by no means certain, that the influence exerted on practice by hasty speculation has not been productive of material injury. We believe, for instance, that the supposition that anterior curvature of the spine, arising from carious vertebrae, might be cured by means of the horizontal position, has done positive harm, by leading to the rejection of counter-irritation, and by introducing confusion among the ideas entertained, as to the nature of the disease. The lateral curvature, common as it is, and much as has been written about it, is still more unsettled in every thing that regards its nature and treatment. Nothing positive is known of the state of the parts, or of the organs primarily affected: by one writer, it is referred to disease of the bone; by another, to disease of the ligaments; by another, to affection of the muscles: Dr. Dods has very ingeniously suggested, that the spine is not incurvated, but merely rotated on its axis, an idea, however, contradicted by the fact, that the subjects of lateral curvature actually lose a part of their original stature; and lastly, Dr. Jarrold, in the Inquiry before us, contends for the supposition, that the original cause of the disease is to be found in an altered condition of the intervertebral substance. In this state of professional opinion, it is evident, that an accurate anatomical investigation into the state of the vertebrae and their dependencies, is one of the principal desiderata, particularly if it be combined with the observation of symptoms during life; until we shall have obtained something of this kind, it is impossible to expect that we can ascertain the most suitable modes of treatment, or that, possessing them, we should be generally successful in their application.

Dr. Jarrold first treats of curvature of the spine, from within outwards. According to him, it presents two varieties, curvature with, and curvature without loss of motion. One of his favourite ideas appears to be, that the angular curvature of the

spine is not a consequence of scrofula. The vague manner in which that term is used, renders it difficult to speak decidedly on that point; but even if we admit that scrofula is not the only cause of the disease, there cannot be a doubt that it often takes place in scrofulous subjects.

"Scrofula," says Dr. Jarrold, "the leading and generally supposed source of diseased vertebræ, is hereditary, the outward curvature or hump-back is not hereditary."—p. 29.

It is unnecessary to say, that this piece of logic involves two mistakes, and that, whilst scrofula is not always hereditary, curvature of the spine is occasionally so. In some subsequent speculation, the author wanders still farther from what we conceive to be the real state of the case.

"Again, caries from scrofula usually produces hectic fever, and subsequently, death."—p. 30.

"But although the disease (in the spine) moves on year after year, destroying as it advances, gangrene is never apprehended, and death seldom accrues. Another effect of scrofulous caries, is the production of purulent matter. This essential and invariable consequence is unknown in caries of the spine; a distinction at once conclusive and characteristic."

This distinction appears, however, to be done away by the admission which Dr. Jarrold is obliged to make, that—

"In some cases, which are probably distinct varieties of the disease, or when scrofula attacks the vertebræ, for it cannot be contended that this part of our system is exempt from that malady, matter is formed, which, finding its way between the muscles, ultimately becomes a psoas, or lumbar abscess; and all the consequences of scrofula follow."—p. 31.

Another peculiarity assigned to carious vertebræ, is equally liable to objection: this is stated to consist in the removal of the disease from the system, after the curvature is completed.

"No second attack is ever made, nor does the disease remove from one part to another."

If we were to say that the reverse was the fact, it would be nearer to the truth. But without farther discussing the matter, it will be sufficient to state, that nothing is more common than the occurrence of caries of the spine, and curvature in those individuals, who have been the subjects of diseases of the glands and joints, and other scrofulous affections equally unequivocal. Dissection, too, the touch-stone of pathological doctrines, shews that the vertebræ, in cases of caries, often undergo the change of structure met with in the other bones, when affected with scrofula, and that this state is often accompanied by the presence of tubercles in the lungs and liver.

*Necrosis*, Dr. Jarrold, by a strange misconception of terms, considers as another species of caries, but not of the nature of the disease which attacks the vertebræ; and adds,

"That it (necrosis) is characterized, not so much by the death of a bone in whole or in part, as by its entire re-production."—p. 33.

We had been accustomed to suppose, that necrosis might occur without regeneration of bone, and therefore confess ourselves rather at a loss to understand how a disease can be characterized by a circumstance which may never present itself.

Four cases are related as specimens of the form of curvature of the spine, without loss of motion. The second we shall quote, merely because it is the most concise.

"Joseph Coomb, aged eight years, was taken ill in December 1821, and confined to his bed several weeks; but the disorder was never ascertained. After a partial recovery of two or three months, he was in May, 1822, seized with a pain in his neck, attended by a fulness on both sides of the spine, the head resting on the shoulder: he remained in this state until July, when I saw him and prescribed A GRAIN!! of ext. hyoscyam, morning and evening. The beneficial influence was apparent in a week, and in a month he was perfectly restored."—p. 37.

There is, in this case, no evidence of disease of the spine, unless we consider, with the author, the fulness on both sides of it to be a diagnostic symptom: according to him, a neck rendered stiff from an affection of the muscles, is not swelled; an opinion for which there is not any sufficient ground. The curvature too, if any, must evidently have been lateral. In some other cases, the curvature is stated to have been anterior, and a few leeches were applied, but in other respects, their nature and treatment were very similar to that above related. We cannot help altogether questioning the existence of any thing like caries of the vertebræ in any one of them.

In what he says of the curvature of the spine, with loss of motion, Dr. Jarrold has almost wholly confined himself to criticisms on the opinions advanced by other writers. Even in this respect, he does not appear to have been very successful. Speaking of the modes of treatment recommended by Messrs. Pott and Baynton, he says—

"Neither appears to have understood the principles by which the cures they witnessed were effected, which led them into error; for having removed a fatal symptom, they concluded that they had removed the disease. The loss of motion is but an occasional consequence of an outward curvature of the spine. But those gentlemen have confounded the cause with the effect; and published to the world, as a cure for a curvature of the spine, that which only removes one of its consequences."

We object to the idea of putting the practice of Mr. Pott and that of Mr Baynton on the same footing; there can be no doubt but that the cases which influenced the latter gentleman in his objections to the use of caustic issues, must have been totally distinct from those described so well by the former: in this instance, as often happens, the objection lies, not against the mode of treatment, but its indiscriminate application to every kind of case. We do not understand what Dr. Jarrold means by a CURE for curvature of the spine. He surely cannot expect that any kind of practice can succeed in restoring the natural form of a spine, which has become incurvated as a consequence of caries.

It is gratifying to turn from all that is obscure and objectionable in the arguments Dr. Jarrold has advanced on this topic, (and certainly there is enough of both) to something more clear and more deserving of general attention; such we consider to be the importance which he attaches to the operation of constitutional causes in the production of caries of the vertebrae, and the energy with which he protests against its being considered as a merely local disease. In regulating the treatment, his attention appears to be almost exclusively confined, in truth, too much so, to the state of the constitution; and the only local means that we find recommended, consist in the occasional application of a few leeches. He appears also to be an advocate for the horizontal position, and speaks so undecidedly with respect to caustic issues, that we cannot suppose he is much in the habit of witnessing their effects. We should be sorry to misrepresent the author's views of the treatment of the disease, but we have experienced considerable difficulty in estimating their nature. He praises the ext. hyoscyam., as being in all cases beneficial; and in most recent ones, capable of effecting a cure. We fear that the latter clause of this opinion will be found most unfortunately opposed to general experience.

We were rather surprised to meet a Chapter on the hip-joint diseases, in a work professing to treat on Curvature of the Spine. The author's object appears to be to attempt to establish an analogy between it and the curvature of the spine; that such an analogy exists, there can be little doubt, but by no means in the particular manner he supposes; and in fact, this very analogy forms a pretty strong argument against the view he has adopted of the curvature of the spine, connected with caries. He is pleased to consider the hip-joint disease, "as being *sui generis*,"—"as bearing no analogy to," and, "as having no sameness with other diseases of joints." Unfortunately for the credit of this opinion, the advances of modern

surgery have shown just the contrary, and that the affections of the hip-joint do not present any thing which is not met with in other parts of similar structure. We know not what meaning the author may attach to the barbarous and unscientific term—"white swelling,"—but, for ourselves, we were not aware that the diseases it is meant to express had, more than disease of the hip-joint, a necessarily scrofulous origin; or that they, more than it, were characterized by the presence of purulent matter.

In treating of the lateral curvature of the spine, Dr. Jarrold commences by giving his reasons for dissenting from some of the causes which have been assigned for its origin. It is allowed on all sides, that it is totally distinct from the anterior curvature consequent on caries. It differs from rickets, according to Dr. Jarrold, inasmuch as rickets is a disease of the bone, and the curvature is not; in one case, the texture is porous and soft; in the other, it is in its natural state. He is equally unwilling to admit muscular debility as the cause: that muscular action may keep up a curvature already existing can be understood, but not that it should produce it. Dr. Jarrold asks the very pertinent questions:—

"If debility be the cause? Why is it local? Why are the muscles attached to the spine alone affected? Are they paralyzed, or is the debility of a specific nature: If so, it is a disease; or by what other means is a local debility produced?"—p. 78.

"In the view I take of the subject," says he, "a diseased state of the intervertebral cartilages, is the occasion of the lateral curvature."—p. 79.

That this may really be the case, is by no means impossible; but the grounds on which he has advanced the supposition are certainly not by any means sufficient to authorize any positive conclusion. At present it stands altogether as a hypothetical suggestion, the merits of which must be decided by future experience. Dr. Jarrold has, in order to support his own ideas, quoted Mr. Brodie, who discovered in the centre of some intervertebral cartilages that came under his notice, a dark spot, which probably preceded the destruction of the parts. He has, however, not perceived, or has forgotten to mention, that the cases in which Mr. Brodie detected this change of structure, were not cases of lateral curvature, but of anterior curvature connected with caries; and that the object of that gentleman in relating them was, to prove that caries of the spine, at least occasionally, commences in the intervertebral substance. The following case, however, communicated to Dr. Jarrold, by Mr.

Peter Barrow, is more in point, and is worth more than all the wordy speculations of the author.

Jan. 9, 1819.—“I visited Eliza Illingworth, aged nine years, who died a few hours afterwards of inflammation of the chest. For more than eighteen months, this little girl had been the subject of a curvature of the spine, which extended to all the dorsal vertebræ: the curvature was on the left side, and occasioned great deformity. No treatment had been had recourse to. On examination after death, the ligaments of the dorsal part of the spine were slightly affected, but the intervertebral substances were greatly diseased, at some parts, particularly at the convexity, being red and thickened; and at others, being converted into a pale jelly-like substance. Throughout they had lost their elastic cartilaginous nature.”—p. 84.

If it were admitted that the original cause of the lateral curvature consisted in a change of structure in the intervertebral substances, it would still be necessary to point out the *modus operandi* of this change. At first sight there appears to be no sufficient reason why such a change should produce curvature; or, granting it had the power to do so, why the curvature should always be lateral, and not anterior, or posterior. Dr. Jarrold appears to have satisfied his own mind on this particular; but as we do not profess to be able to understand every thing he advances, it will be better that he should speak for himself.

“In the view which I take of the subject, a specific disease distends the cartilages, which the energies of the constitution frequently remove, and the figure suffers only in degree; in other, and more advanced cases, the distention is so considerable as to occasion an uneasy sensation near the part, the effort to relieve which causes the curvature. It is not that the ligaments, or the bones, or the muscles, are diseased; or that the disease of the cartilages is of itself the cause; but the muscles being made to act partially on the spine while the cartilages are in this state; the same effect follows as when pressure is applied to the ancle.—(To the diseases of which the author had referred for the purpose of illustration.) p. 87, 88.

“But other evidence of the existence of disease yet remains: a curvature is commonly preceded by indisposition, more or less considerable, but without a definite character. After months or years passed in this state, its nature becomes manifest by the enlargement of one of the shoulders; after which the indisposition diminishes, it being the termination of the attack; and in a few weeks, the shoulder becomes less, and the health improves; but the original shape is not fully restored: and those who suffer from this one attack, although the spine be not incurvated, have lost something of the elegance of their figure. But commonly, another attack follows in the ensuing Spring, or it may be at the distance of years, when the flesh again wastes, the countenance becomes pale, the shoulder once more rapidly increases, but the indisposition is unwillingly



acknowledged, because it is with difficulty described. All this may be completed in a few weeks, or even days, for the enlargement is not gradual, but sudden: I have seen a decided increase in a single day. Commonly on the third attack the spine loses its natural position, and becomes slightly curved."—p. 89, 90.

Dr. Jarrold insists upon the elevation and prominence of the shoulder blades as a diagnostic symptom.

"In every one in whom I have noticed this appearance, although it may almost spontaneously disappear for a season, it has returned and a curvature, unless counteracted by medicine, has always been the consequence."—p. 96.

"At this period a short course of medicine replaces the shoulder in their proper position, and if future attacks should be made, and be treated in a similar manner, the natural symmetry and proportion of the figure will be preserved. Remove the cause by destroying the disease, and nature will restore the figure."—p. 97.

Even in the worst cases, where the curvature is considerable Dr. Jarrold conceives that the form may often be much improved, and the health in a great degree, if not absolutely, restored. He objects to the use of mechanical means, and speaks doubtfully of the benefit to be derived from the horizontal posture. In the manner that it is often practised, the latter is very likely to do material injury to the state of the general health and in that way to aggravate, instead of relieving, the local disease.

These, and similar measures, such as carrying a weight on the head, friction, and other means of invigorating the muscle may, according to Dr. Jarrold, prove useful occasionally as auxiliaries; but the practice on which he places the greatest reliance, is that which is calculated to amend the impaired state of the general health, on which he supposes the lateral curvature to depend. From some real or imagined relation between it and bronchocele, he has been led to employ certain remedies, which have been found serviceable in the treatment of the latter.

"From ten to fifteen grains of burnt sponge, and from four to six grains of carbonate of soda, and if debility be considerable, twenty drops of nitric acid, are directed to be given daily. Very soon the increased flesh on the shoulders begins to diminish, and in two or three weeks disappears. The shoulder blades at the same time fall, and re-occupy their natural situations: the health, which had been more or less disturbed, resumes its ordinary state; the mind becomes cheerful, and capable of application; the languid dispirited aspect, which seemed to call for the use of tonics and stimulants, is dispelled without them. Medical treatment is seldom further required, unless the appetite and digestion be impaired."—p. 117, 118.

We shall not stop to inquire whether this picture of the good effects of a particular kind of treatment may not be rather highly coloured. That is a matter of no great importance ; it is enough to know that it rests on a rational basis, and that this part of Dr. Jarrold's work is best entitled to the consideration of the profession. We wish it were in our power to speak as favourably of the whole ; but it is impossible to conceal that, in the mass, it presents but little that is new nor important ; that it is not distinguished for clearness of conception or expression ; and worse than all, that it contains a very considerable number of flagrant violations of the most common rules of grammatical composition.

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ART. IV. *Doctrine Medicale, expliquée d'après les Theories enseignées depuis Hippocrate jusqu'à M. Broussais.* Par J. L. MICHU, M.D. &c. &c. 8vo. pp. 439. Paris, 1824.

M. Michu professes, in the compass of this small volume, to explore the vast subject of medical theory, from the days of Hippocrates to the present time ; and to extract from it whatever is true, or at least, whatever approximates to truth. In doing this, he has paid a high compliment to the observation and sagacity of Hippocrates, and has deservedly reprobated the humoral doctrine of Galen, and his many other fanciful speculations. In the earlier times, the greater number of physicians were soldiers, or the followers of Themison and Thessalus, who believed that the essence of disease resided exclusively in the solids ; and these men, Galen, with an arrogance which seems to have been natural to him, has denominated the asses of Thessalus. In general, the physicians of the present day, though far from deserving so contumelious an epithet, are solidists ; a few of them, however, having a slight bias towards the humoral pathology. Among these last, we may perhaps rank the author of the work before us ; but there is so much subtilty in the greater part of his reasoning, that we sometimes find it difficult to comprehend his meaning ; and, in our opinion, his doctrine of the temperaments is as little capable of proof, as the humoral pathology of Galen.

When matter becomes organized, we are informed by M. Michu, that the first principle imparted to it by the vital power, is tone.

"The creating power," he observes, "and the principle of motion, are the same thing. Tone (*tonicité*) is the lever by which this power or this principle produces all the phenomena of organized bodies; and by its means, the exercise of life commences. The first dress, then, which clothes organized matter, is the tone imprinted upon it by the vital power.

"Tone is the cause of contractility of fibre; the one is subservient to the other; we may say, abstractedly, that tone precedes contractility, or, in other words, that life is the cause of motion, that contractility is its effect, by the intervention of tone.

"Tone is inherent in all organized bodies, in all the textures, and in all the systems of organs; it regulates their nutrition, and their functions.

"In proportion as organization becomes more complex, and as new organs are called forth, tone is the first property conferred upon them by the vital power.

"Modified according to the nature and primitive disposition of textures, it stamps all the organs with a distinct character, which, to use an expression of Bordeu's, gives to each a life, which is peculiarly its own."—pp. 9, 10.

All the textures, therefore, which constitute organization, whether animal or vegetable, are endued with a tonic force, and are regulated by it. This force is bestowed equally upon the capillary, nervous, and muscular systems; and as long as these systems so retain it, there is a state of perfect health. To form, therefore, an accurate judgment of disease, it is a matter of the utmost moment to have a correct idea of the state of tone in each individual, while in health. Hence, in the cure of diseases, it is of great use for a physician to have been long and intimately acquainted with his patient.

In the above sketch, the reader will at once perceive a part of the celebrated doctrine of Stahl, but stript of the graces and animation of that eminent physician. To him, however, in some respects, M. Michu has done ample justice, and has spoken favourably of his works.

"The resources of medicine," he says, "are always proportioned to the dispositions of the individual who is diseased. It is of the utmost importance to pay attention to these dispositions, in order to appreciate the tendencies of nature. Of the necessity of this, Stahl was thoroughly convinced. Before knowing what he has to do, the physician should endeavour to find out what nature is capable of doing; and this should be one of the principal precepts in medicine. It would be a useful check upon many physicians, who think that the art of healing consists entirely in action."—pp. 27, 28.

Stahl, as well as Hippocrates, was sparing in the use of medicines—

"Why do we observe this disinclination to the use of medicines

only in the most enlightened physicians, and in those who are endowed with a superior judgment? Is it not, that a reason for administering medicines is often wanting to the physician who will not act but upon sure grounds? while, on the other hand, one is every where visible to him who is in the habit of attributing to his own skill a success which is often entirely owing to nature; whom, from the same cause, he perhaps sometimes accuses of imbecility, when he himself alone has thwarted her efforts by medicines uselessly or improperly administered?"

"A living author, who has justly acquired a great name, M. Pinel, has been accused of not employing an energetic mode of treatment, and of trusting too much to the inherent vigour of the vital powers. Is such an accusation well founded? Let the question be answered by his doctrine. Rejecting various theories of his predecessors, he has made anatomy and physiology the basis of his principles."

"It is upon the different properties of the various systems of the animal economy, considered according to the nature of their textures and peculiar functions, that the doctrine of M. Pinel is founded; a doctrine which has the advantage of uniting under one point of view the diseases peculiar to each system, and which enables us to lay hold of the characteristics which distinguish them, and to mark the differences presented by the morbid state in each part of these systems."

"In thus applying analysis to medicine, M. Pinel has much facilitated the study of the science; he has prepared a way for its improvement, without subjecting it to principles which are too general: and on this account he deserves our homage."

"A great man is always preceded by a great man. Had Haller, Bordeu, and Grimaud, never made their appearance, Bichât and Pinel would have been less celebrated. The same thing may be said of many physicians of the present day, who are indebted for the fertilization of their genius to the labours of Bichât, and to the doctrine of Pinel."—pp. 35-7.

We need not here enter, as our author has done, into the nosographical classification of Pinel. In France it now meets with some keen and even virulent opponents; yet we must allow that it has been subservient to the advancement of medicine.

"In medicine," says M. Michu, "a person may do better than his predecessors, but he cannot create a new science. He may add, occasionally, a few links to the chain of known truths; the remainder is mere controversy, and deserves not a moment's attention, except to convince us that the greater part of the theories of the day present nothing new, but the language in which they are disguised. Under the name of physiological medicine, the doctrine of M. Broussais has enjoyed, and still enjoys, a very high reputation; but it should enlighten without dazzling us. Without being the devoted admirer of M. Broussais, I think it a duty to take notice of the high merit which distinguishes him, and to acknowledge that,

even though his principles should be abandoned, the science will be indebted to him for having given a happy impulse to its progress."—pp. 41, 42.

M. Michu now gives a short sketch of the doctrine of Broussais, and compares his opinion concerning febrile diseases with that of Sydenham, and then favours us with his own.

"May we not fix," he says, "the meaning of the word fever, by applying it to those diseases which are called febrile, with superaction of the arterial circulatory system, and understanding by it a superactive motion of the heart and arteries, produced by a local irritation of the capillary system, or by a general state of plethora."

"Thus, even admitting that the greater number of diseases are occasioned by irritation, we may divide them into those which are accompanied by fever, and into those which produce no reaction on the arterial circulation. This would enable us to divide irritations into febrile and non-febrile; and perhaps, were investigations undertaken to establish this distinction upon characteristics peculiar to both kinds of irritation, they might be of advantage to the progress of science, by displaying under these two heads the shades of difference, and the phenomena which distinguish them."—p. 48.

In the above extract, we suppose the reader familiarly acquainted with the doctrine of Broussais, and therefore shall not waste time in a farther consideration of it. A matter of much more consequence, than that of tracing the intricacies of his system, will be to impress upon our minds the necessity of appreciating the intrinsic strength of an individual, before he become diseased, and of ascertaining the relative capacities of art and nature. This is an object too much neglected at the present day. Here our author makes use of *tone*, as a measurer of debility, considering it as the regulating medium of the vital phenomena; but on this subject we shall allow him to speak for himself.

"The capillary, nervous, and muscular systems," he says, "exhibit in their regular state a degree of molecular cohesion, that constitutes the tone or strength which is peculiar to them. We may form an idea of the most perfect organization, by supposing the complete harmony of the different systems amongst each other; but if such a state could take place in any individual, it would not, according to the opinion of Galen, exist for one minute. What then is the cause of the derangement which takes place? Each of the systems in which tone resides ceases to preserve its equilibrium; what one gains in tone another loses; and each organ receives a particular modification of it, which impresses upon the constitution a kind of existence forming the idiosyncrasy peculiar to each individual. But how are idiosyncrasies established, and how are they distinguished?"—pp. 56, 57.

To answer those questions, M. Michu enters at some length into the consideration of the above-named systems; particularly of the capillary, the existence of which, he thinks, is in some respects insulated; as the capillary vessels are subject to the action of neither heart, arteries, nor nerves. Their tone supplies the place of every thing, and by its means they are enabled to regulate nutritive or organic life, which is capable of a kind of feeling without the intervention of nerves. We smile here, when we recollect the name bestowed on these vessels by M. Duges, of nerve-arteries, from their being in a manner constituted of nerves.

In the opinion of our author, it is not from the examination of the internal organization of man, or of the functions which are exercised within him, that we are to draw just conclusions concerning temperaments and idiosyncrasies, but from that of his external appearance and apparent constitution.

"Even our celebrated Hallé," he observes, "considered the knowledge of temperaments as of less use in the treatment of acute diseases, than as a means of fixing the regimen of health, and regulating the management of chronic ailments. I, on the contrary, am persuaded that it is of the greatest importance to the treatment of acute diseases to pay attention to the particular temperament or physiological condition of each individual. To fix the type of temperaments, and to form an accurate idea of the idiosyncrasies or modifications produced in the constitution by the capillaries in general, it is of consequence to appreciate the influence of the two classes of these vessels, the sanguineous capillaries, and those which convey colourless fluids.

"The predominance of fixed action of the sanguineous capillaries constitutes the bilious temperament; and from the predominance of the capillaries which convey colourless fluids results the lymphatic constitution. When the action of these two classes of capillaries is exactly balanced, we have the characteristic of the sanguineous temperament."—pp. 63, 64.

There is, properly speaking, no nervous temperament, for the nervous system exerts no preponderance whatever, except as the organ of intelligence and genius. The predominance of the muscular system produces the athletic temperament. The bilious is the least liable to disease, and it receives its characteristics from the abdominal viscera, in which its diseases are generally situated.

"The diseases of this temperament," says our author, "are announced, in general, by heat and dryness of the skin, by thirst and a parched tongue, tension of fibre, emaciation, &c. Their seat is generally in the hepatic system, or in the mucous membrane of the digestive passages. The stools are bilious, the urine thick, saffron-

coloured, and depositing a sediment. Chronic alterations of organs occasioned by injuries of the circulation in the sanguineous capillaries, are a frequent consequence of such diseases. In short, they give an exact representation of the state of *strictum*, which Themison regarded as the distinguishing mark of a class of diseases.

"To the physiological state of the bilious temperament, is joined a disposition of the system of cerebral nerves, which, by means of the well directed exercise of the intellectual faculties, may produce a preponderance of that system, and a state of regular action, capable of being maintained, without any interruption to the harmony of the vital functions; a circumstance which might almost authorize the admission of an intellectual temperament.

"When, from any physical or moral cause, the normal state of the bilious temperament is changed, the disposition to melancholy ensues, and the moral habits, and the whole mode of thinking, are strikingly affected by it, which indicates the close connection that subsists betwixt the bilious temperament, and the cerebral nervous system."—p. 68.

The chest is the source from which the sanguineous temperament receives its distinguishing characteristics; and its diseases are inflammatory irritations, and active hæmorrhagies.

"The lymphatic temperament," M. Michu informs us, "is characterized by a plumpness of the cellular texture, by a fair skin, a slow and a weak pulse. Fatigue is brought on even by slight exercise. The mind is inconstant, and the memory not strong. It is from the cellular texture, the lymphatic system, and the mucous membrane, that this temperament derives its characteristic marks and catarrhs, aphthæ, serous diarrhœas, dropsies, œdema, herpes and congestions of the brain, are the phenomena which more particularly belong to it."—pp. 70, 71.

In this temperament, he affirms, the action of the nerves is in general, irregular and inconstant, but he makes an honourable exception in favour of the people of Bray, in Normandy where he once practised medicine. Connected with the athletic temperament, and characterizing it, are the heart, the diaphragm the intercostal muscles, the uterus, the fibrous coat of the arteries, intestinal canal, bladder, &c.; but our author is in doubt whether there is, after all, an athletic temperament. At any rate, he denies to it deep pathos, or great intellectual energy. Of all the systems, however, the muscular, he thinks, is that the physiological and morbid phenomena of which, have most connexion with the qualities and quantity of blood, and it is that which first suffers from debilitating causes.

In the above sketch, who does not see, disguised, indeed, in a new language, the ancient doctrine of the temperaments, resting, it is true, upon a more solid, but a not less hypothetical base, than that of Galen? Yet, after all, there is truth in the

distinction of temperaments; and the doctrine, when properly limited, may be a useful guide in practice. From this cause alone, have we gone into it at some length.

We refrain from touching upon our author's speculations, concerning animal and organic life, but shall give his reflexions on cerebral sensibility, considered as the source of the vital phenomena.

"The brain," he says, "has been considered as the principal organ, whence emanates the energy which is essential to every action of life. In admitting the principle of life, we admit that of feeling, and in deriving the sensitive system from the brain, physiologists have been under the necessity of considering the cerebral organ as the principle which produces and regulates the vital phenomena. Man, indeed, they have regarded as a kind of pillar, upon the capital of which they have fixed their principal attention, but have looked upon the shaft and pedestal as objects of secondary consideration. Would not an opposite proceeding have been more convenient for obtaining a just idea of the production of organs, for observing their growth, and afterwards, for better comprehending the mechanism and the phenomena of the animal economy? in other words, by tracing the progressive order of organic production upwards, from the most simple animal to man, we might have been able, perhaps, to have pointed out the essential characteristic of the human being. It is in the brain, where we probably should have found the physical and independent cause of his superiority. Taken as a whole, the features which characterize man are, undoubtedly, well marked; but in the most perfect being, the brain should present a distinct part, which is the complete and finished point of organization."—pp. 103, 104.

After some remarks on the production and growth of the different textures, he casts a glance upon the brain, considered as the centre of morbid phenomena.

"All the sensations," he says, "all the resolutions of the will, all the phenomena of intellect, and all the principal phenomena of animal contractility, belong to the physiological action of the brain. The least disorder occasioned to the exercise of the functions of external life directly affects the brain; but it may be affected primitively, or in a secondary manner. The secondary affections which, in the acute state, come to it from the organs of nutritive life, (the abdominal viscera) are less severe than those which come from the organs of animal life. The delirium which is the consequence of bilious fevers, or inflammations of the bowels, is less dangerous than that which is produced by inflammatory affections of the chest. In diseases and operations which are seated in the viscera of the abdomen, tetanus is much more rarely observed, than after the amputation of a limb, or of any other operation performed on an organ of external life.



"With regard to mental affections, some also are primitive, and others secondary; and what, on this subject, is very remarkable, every kind of madness which does not depend on a direct affection of the brain, appears to have its seat, particularly, in an organ of nutritive or ganglionic life, and we must search in the abdomen principally for its cause."—pp. 110, 111.

The ancients considered diseases as alterations of texture; but, according to M. Michu, in the generality of diseases, it is not the texture which is altered, but the strength (tone) which is peculiar to them.

Those anatomists, he observes, who have been most employed upon animal organization, are inclined to think that all the organs, whatever is their nature or density, are formed of a network of vessels, the character and properties of which depend entirely on their arrangement. This opinion seems to be confirmed by capillarity, under the influence of which the life of the most simple beings is carried on.

We need say little of our author's remarks on debility and caloric.

"The latter," he observes, "considered as a therapeutic agent, is a subject of study, from which the science of medicine may receive great advantages; and in this respect, physicians have still much to do. May those who have it in their power to advance the progress of medicine, see in it an object worthy of reflexion and of experiment."—p. 142.

It is only as a modifier of the atmosphere, that M. Michu considers caloric in this place; and we see no novelty in his remarks; in which, however, he has interwoven an etiology of the yellow fever. He is inclined to believe, that the stools peculiar to that fever, and to certain diseases of debility, scorbutic ecchymoses, petechiæ, and melanosis, are occasioned by blood which has been more or less deprived of its stimulus, and its plastic power.

Dyspnœa, he thinks, is often occasioned by too much atmospheric heat; and he has found that symptom aggravated by blood-letting. By cooling the air, indeed, and employing refrigerants externally and internally, he has been fortunate enough frequently to remove dyspnœa, which threatened to destroy life. While on this subject, he takes a rather extensive view of the Italian doctrine of *contro-stimulus*, and shews that the Italians, from being keen Brunonians, have run into the opposite extreme, and have arranged the most heterogeneous remedies, under the head of *contro-stimulants*. Their only stimulants are caloric, the electric fluid, phosphorus, æther, ammonia, opium, musk, camphire, wine, alcohol, carbonic acid, aromatics, and, according to M. Rolando, light, the nervous fluid, and blood.

We have now arrived at the second part of our author's work, in which he directs his attention more particularly to the curative treatment of the disease; and here we shall, first of all, extract a few of his remarks on this subject, (*la thérapeutique.*)

"In order," he observes, "to show the importance of therapeutic medicine, as a science, it will be sufficient to fix its limits. The investigation of the causes of diseases, and the study of those spontaneous symptoms which characterize them, constitute the object of nosographic medicine, such as it has been transmitted to us by Hippocrates. The object of therapeutic medicine is to oppose disease, and to observe the varieties of change produced by the action of regimen and medicines, and to prescribe and regulate the use of the two last. Considered in its object, therapeutic medicine, it is evident, is the noblest and most necessary branch of the healing art; without it there could be neither accurate observations, nor exact experiment; it is the science of consequences; with it is connected all medical knowledge, and without it art can make no progress; it is real practice; and, in short, the science of the practitioner.

"Therapeutic medicine keeps aloof from the systematic reveries of imagination; it cannot be exercised in the closet; its step is slow, and it will not be subservient to the eager views of ambition; it is intent on distinguishing the resources of nature, the better to point out those of art; and it requires in the physician a sound judgment, uninfluenced by systematic notions, and capable of exactly comprehending the phenomena of life, and laying hold of all their shades.

"Always with the patient, therapeutic medicine allows nothing to the play of fancy, but is seriously intent on one object. To know when we should act, to trace the connexion which may subsist betwixt the phenomena of disease, and the action of remedies, in order to establish from it, as far as we can hope to do, fixed principles of treatment; and to prove, by successful practice, that medicine has really made some progress, are what we have a right to expect from this science.

"Another circumstance to be mentioned, as connected with therapeutic medicine, is the advantage to be derived from an explanation given by the physician, after the history of each disease, in order to justify the treatment which may have been adopted. This would lead to a habit of noticing the action and effects of medicine. We should thus see fewer practitioners employ, without reflection, the formulæ and modes of treatment of celebrated physicians. As the attention would be then more directed to the study of characteristic symptoms, so would the treatment necessarily become more methodical. If the motive for employing a particular remedy were not well founded, the subject would become matter of discussion, error would give place to truth, and every day, no doubt, we should by this means see the mass of medical uncertainties diminishing.

"The history of cases would also be more exact, if the apothecary

cary who executed the orders of the physician were honourably mentioned; this would be the means of restoring pharmacy to its proper dignity, and of ensuring the exhibition of good medicines, and the faithful preparation of formulæ."—pp. 163-169.

In his farther progress, M. Michu borrows some illustrations of his subject from surgery, and he begins with irritation.

"Whether we consider irritation," he observes, "as exercised on the white, or on the sanguineous capillaries, we must always pay attention to the intensity of the phenomena, which are its consequence. The same degree of irritation may produce different effects, according to the part which is its seat, or according to the idiosyncrasy of individuals. In proportion to the state of tone, under the influence of which the irritation may have appeared, diseases must necessarily be produced, in which the fluxionary movement will be terminated by resolution, by suppuration, by sudden retrocession, (*delitescence*) or by atonic ulceration."—p. 171, 172.

Irritation, in M. Michu's opinion, exists in the greater number of diseases; but as it is not always identic, neither is it at all times to be treated in the same manner.

"We are taught by surgery that the cure of wounds never proceeds regularly, but when they are accompanied by a moderate degree of inflammation. With this maxim, which cannot be disputed, the pathological and curative theory of almost all diseases may be considered as in connexion.

"Resolution, which is the most desirable termination of the inflammatory state, never takes place but under the influence of a moderate irritation; the wound, which proceeds towards its cure, and the inflammation which tends to resolution, are the regular phenomena of a lessening irritation; it is the state in which the surgeon leaves every thing to nature; to bring diseases into this train, should all the efforts of a physician be directed; for in this, so to speak, consists all his science.

"What happens when a wound is *under* the inflammatory state, necessary for its cure? On the most favourable supposition, it will pass into the state of an atonic ulcer; but if a deleterious cause is at hand, and attacks the patient, and if the wound is one which discharges a good deal of pus, as is the case after a great surgical operation, the parts change their colour and become white; the secretion of pus ceases; then the lungs, the brain, or some other important organs, become the seat of alarming symptoms; and life is endangered.

"Suppose an eruptive disease, or an inflammatory tumour. If the disease, instead of going regularly through its stages, disappears spontaneously, disorder of the internal functions will ensue, and the danger of the patient will be more or less imminent. The irregularities of the inflammatory state and of suppuration, produce the greater number of those untoward circumstances, which are observed in both internal and external diseases."—pp. 175, 176.

M. Michu continues to pursue the same subject, and treats of *delitescence* and *metastasis* at some length.

"Although," he observes, "delitescence, or the spontaneous and sudden retrocession of an inflammatory humour is generally the result of weakness, it may also be occasioned by an active accidental cause; and errors of regimen, or an improper mode of treatment, may produce it. I have seen it take place in cutaneous inflammations, after the use of irritating medicines taken internally; leeches; also, and opiate or discutient remedies, applied without necessity to an inflammatory tumour, may occasion it. In the year 1818, so remarkable for the great number of cutaneous inflammations which prevailed in Paris, I had an opportunity of seeing a number of patients with erysipelas in the face, who had had leeches and a solution of acetate of lead applied to the affected part. Paleness of the eruption, and thereafter its disappearance, excruciating headache, and the sensation as if a cap were girding the head firmly, were the effects of this mode of treatment. When consulted in such circumstances, I prohibited every kind of local treatment, I prescribed a grain of emetic in dilution, and the use of mucilaginous diluting drinks. The erysipelas again appeared, headache ceased, and in a few days the patients were restored to health."—179, 180.

Metastasis is not a phenomenon of debility, but the effect of a superactive irregularity of the vital properties: it bears the disease from one part upon another, by means of an irritation predominating towards the spot where it is produced; it is dangerous when it moves from a less essential to a more important organ; and in the contrary case it is favourable. Metastasis differs from sympathy, in the latter being merely an irradiation, and not a displacement of disease. These two should be carefully distinguished; and we ought not too hastily to believe that there is inflammation of the brain when acute diseases are accompanied by delirium, coma, and other cerebral phenomena.

After many remarks on the above subjects, some of them useful, but none of them concise, he notices, as in that of irritative, the danger of a too exclusive theory.

"I have seen," he observes, "patients treated for years with the reiterated application of leeches upon scrofulous tumours, and with the strict observance of a vegetable and mucilaginous regimen, but without the slightest benefit. The complexion, on the contrary, faded, the face becomes puffy, the digestions were performed with difficulty and pain, and the local affection, instead of lessening, increased. Such, in medicine, is the inconvenience of extremes.

"It is lamentable to observe, that the greater number of M. Broussais' followers seek, in his doctrine, a mere cover for their laziness and their ignorance, in assigning to all diseases but one cause, and but one mode of treatment. We must, however, make an honourable exception in favour of some physicians who adopt

his doctrine without becoming slaves to it, and who act upon those parts of it only which their own experience may have confirmed ; and such men alone can show with truth, the claims that their master has to the gratitude of the public."—pp. 192-194.;

Scrofula, our author very properly assigns to debility of the system ; or, if he please, the capillaries ; and his treatment, of course, is that which we believe is now generally followed. Gout and rheumatism he treats with warm flannels and water gruel ; and in these diseases, he has a mortal dread of metastasis. The application of leeches he condemns in gout and rheumatism ; and he has given a number of cases which seem to favour his opinion. He thinks that in the external inflammation of these diseases, there is a fluxionary movement, probably resulting from the efforts of the system endeavouring to produce an equilibrium in the vital phenomena, which may become abortive by the use of local blood-letting. In rheumatism he approves of general venesection, followed by warmth and diaphoretics.

Of primitive asthenic gout, he says :—

"This disease attacks persons who are weak and subject to spasms ; the pain which accompanies it is not so severe as in ordinary gout or rheumatism, but it lasts longer. In asthenic gout, the pain keeps pace with the progress of the swelling ; while, in ordinary gout, the swelling does not appear till the pain abates."—p. 209.

Here blood-letting is improper ; but anti-spasmodics and narcotics may be allowed internally. Camphorated liniments are useful as external applications ; but astringents and narcotics are improper. The diet should be generous, but easy of digestion.

"In cases of displaced gout and rheumatism, to favour the action of blisters, sinapisms, and other means of derivation, I have used," he says, "with great success, internally, sulphuric æther, in the proportion of a drachm, mixed with four ounces of syrup of violets ; of which mixture the patient took every half hour, a coffee spoonful in a cupful of infusion of borage.

"I may remark here, with regard to the internal use of anti-spasmodics, that, though they do not answer in the case of confirmed gastro-enteritis, they are of great service in the first moments of the retrocession of gout upon the intestinal canal, for as yet there is no inflammation there ; because the sooner the pain of the intestines can be removed, the surer and speedier will be the deviation."—pp. 211, 212.

M. Michu is very full upon the *crises* of diseases. He considers them as the natural termination of a malady.

"Since the solution of the disease is the result of the tendencies of nature, we cannot study these tendencies too much. To know the character of the diseased state, in order to form a previous judg-

ment of its most ordinary termination; to be attentive to the phenomena, which may give a hope of its favourable solution, so as not to interfere unnecessarily; to know how to distinguish cases where nature needs only to be assisted, from those where the disease evinces a fatal tendency, against which we must bring forwards all the resources of our art: such are the data which should serve to regulate the conduct of the physician, and which are intimately connected with the knowledge of crises."—p. 220.

"The principles of M. Broussais," says M. Michu, "are favourable neither to the doctrine of crisis nor to that of critical days. His school pretends to explain all the phenomena which belong to crises by irritation, as it explains intermission, metastasis, &c.; but it is acknowledged, that when an irritation is cured by another irritation, the last is always stronger than the first; so that no favourable crisis can be expected. In fact, irritation being always a phenomenon of morbid exaltation, it cannot be, like crisis, the favourable termination of a disease."—p. 225.

According to our author, the great majority of crises are the irradiations of a *fluxionary movement*, tending to the solution of the disease, without any disposition to produce an inflammatory state, and great care should be taken not to interrupt these irradiations, when once fairly set in motion. Some of them take place by eruptions or evacuations; others are the result of a state of fluxion directed to a particular part, where the fluxionary movement is extinguished without any remarkable phenomenon; and there are others where the revulsion being made upon a secretory organ, a secretion more abundant than natural is established and becomes critical.

A number of cases are given to explain the nature of fluxionary movements; but we cannot say that we have been much enlightened by our perusal of them. The same thing may be said of M. Michu's *Synoptica Expositio Crisium*.

The author now proceeds to the modifications of the external morbid state, according to the nature and disposition of textures.

"It cannot," he says, "be too often repeated, that there are as many kinds of inflammation and varieties in the morbid states in general, as there are modifications in the texture of each of our parts; wherefore it must be allowed, that if we understand by the word *irritation*, the principle of morbid action, or the phenomenon which excites disease; it is of consequence, we be fully convinced, that its results are as varied as the shades of difference among pathological affections, and that its treatment must vary with the variety of its shades."—pp. 265, 266.

M. Michu now considers the varieties of fluxionary movement and its effects relative to the cellular texture, and to the structure of the lungs. In internal diseases, the febrile action, he

says, tends to make the fluxionary movement diverge from the morbid organ, and produce far from it the phenomena of revulsion. In surgical diseases, on the contrary, the object of the fever seems to be to concentrate the disease at the spot where it first appeared.

We have now a very long dissertation on the subject of Pain. It is thought to be a nervous affection, and antispasmodics have generally been employed, and often improperly, to mitigate it; but pain is not always severest, where there are most nerves. In general, the closer the texture of a diseased organ, the more intense the pain, as we observe in gout, rheumatism, toothache, and whitlow; which all, according to our author's theory, make a strong resistance to the fluxionary movement. According to him, it is the distension of parts, independently of nerves, which causes pain.

We must not follow M. Michu through the wide range of his observations on the above subjects, but we shall extract the inductions which he pretends to have made from them.

"All the vital phenomena," he says, "are governed, 1. by the cerebral nervous system; 2. by the united energy of the cerebral and ganglionic nerves; 3. by the system of ganglionic nerves alone; 4. without the aid of any kind of nerves, by the influence of tone, or organic power modified by the sanguineous capillary system; and 5. by organic power alone, without the intervention of nerves or blood."—p. 283.

We question if Lord Bacon would have allowed the legitimacy of some of these inductions.

Next follow some not uninteresting remarks on the nervous system. If this system have distinct parts and functions, it will also have distinct diseases, each of which will require suitable and peculiar antispasmodics. However this may be, articles of the same class of medicines sometimes act in a very different manner on the nervous system. That system seems to be injured only in part, in chronic diseases of the nerves, whilst in ataxic fevers, the injury is general. Vegetable poisons probably have each their peculiar action on some part of the nervous system. Alcohol acts more particularly on the brain, and in a strong dose produces debility of the muscles; and the less this debility is, the more furious is a drunkard's conduct. M. Michu has illustrated these positions by some interesting cases.

The work terminates with an etiology of gangrenous diseases, which the author has divided into primitive and secondary; claiming this division as a discovery of his own. On these points, we have not time to expatiate; and will do no more now than subjoin an extract from our author's general conclusions.

"To form," he says, "a due estimate of the nature of diseases, we should know the particular texture of each organ, and should make allowances for the modifications it may receive from the idiosyncrasy and accidental dispositions of the individual.

"As a principle of disease, irritation puts in play the fluxionary movement. All the phenomena which constitute the pathological state, may be deduced from the nature of the fluids which form a part of the fluxion, and from the rapidity of the circulatory movement.

"All diseases may be distinguished into superactive and subactive, and the intermediate degrees betwixt the *summum* and *minimum* of vital action, establish the infinite gradations or shades of the morbid state; and it is to these elements that we should refer the etiology of all diseases, and the explanation of their phenomena."—pp. 404, 405.

We have thus finished our review of M. Michu's performance. Among much tautology and nonsense, we have certainly observed some truths, and some correct views; but the work contains many passages, which, like the passages in Gray's *Old House*, lead to nothing. Partly a believer in the humoral theory, M. Michu has talked much of the *fluxionary movement of disease*, a subject, to us at least, not very intelligible, but which, as was once said of the collapse of Cullen, helps the doctor out of many a difficulty. M. Michu has none of the animation, but possesses in abundance the verbiage of the modern French school of theory, and all its dexterity of supposition. The book is written with the view of introducing its author into notice, and probably it may have that effect; for, being unintelligible, it may be looked upon as profound. We wish we could have written our review of it with more energy and elegance; but we have not yet learnt the art of transmuting the baser metals into gold.

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ART. V. *Clinical Report on Dropsies; with Observations explanatory of their Pathology and Therapeutics: with an Appendix on the Theory and Treatment of Organic Disease in general.*  
By ROBERT VENABLES, B.M., &c. &c. London, 1824.

It has been said by some foreigners, Tomassini in particular, that English medical works are almost wholly composed of histories of cases: we believe, that though he exaggerated, there is some truth in the remark; and perhaps what was meant as a condemnation, may in fact, if we strip away the additions of a prejudicial judgment, be considered as no small praise, and as



an indirect acknowledgment that writers of our country consider the results of experience as the only guide admissible in all cases, and fear not to open their eyes to what passes before them, lest they might chance to meet with something in opposition to received doctrines. It does not, however, at all follow that every collector of cases, good, bad, or indifferent, shall at pleasure place himself in the ranks of those who are entitled to our confidence. We fear that in the present instance it would be wholly impossible to admit any such claim, and that Dr. Venables must be content to class with those who appear in print for once, pass away, and are no more seen.

Let us examine a little what he says. After a very luminous preface, in which Dr. Venables either displays his own deficient acquaintance with some of the most important productions of modern medical literature, or reckons on a more than ordinary share of ignorance in his readers, he commences his Clinical Report by intimating that he uses the terms Pathology and Morbid Anatomy, in a sense somewhat different from their common acceptance; this probably on the principle that precise definition of terms is essential to the elucidation of abstruse discussions. For the benefit then, of all whom it may concern, be it known that Dr. Venables uses the term *morbid anatomy* in opposition to *anatomy* simply, which investigates merely healthy structure and relative situation; and that he considers *pathology* as opposed to *physiology*; the former expressive of the doctrine of morbid, the latter of that of healthy function. Such being Dr. Venables' *extraordinary* interpretations of the terms *morbid anatomy* and *pathology*, there can of course be no reason for doubting that the *ordinary* ones differ in every particular; although (to our shame be it spoken) we confess that we have hitherto fallen into the gross mistake of entertaining a different opinion; but the delusion has vanished, we stand corrected.

Ridicule apart, we would seriously inquire of Dr. Venables, how it could enter his imagination, to suppose that he would, at the present day, support any claim to originality on the ground of treating dropsies on the antiphlogistic system, for such is the only peculiarity discernible in the management of the cases he has published, several of which, not to say all, have so little in them, that is important or characteristic, as not to merit the expense and trouble of publication. We will not insult a Bachelor in Medicine, and Licentiate in Physic of the University of Oxford; Physician, moreover, to the Henley Dispensary, by reminding him of the numberless authors covered with the dust of ages, whom he must have consulted, and in whom

he might have found traces, or something yet more strongly marked, of all those views, and that practice, which he with unblushing front proclaims as novel. We will confine ourselves to modern times, and to mention merely a few names only, and those among our own countrymen; we would ask him if he be quite unacquainted with what Wells, Blackall, Parry, Crampton, and Abercrombie, have done, or if he be not well aware that the very treatment of which he makes so much, is familiar to every moderately well informed man in the profession?

We will allow for a moment, that the blind vanity of authorship may form some excuse for the preposterous manner in which Dr. Venables has drawn upon the credulity of his readers; but the same remark will scarcely apply to the want of judgment which has induced him to publish cases containing so little worthy of remark, and about the treatment of which there could be so little cause for hesitation. We are far from intending to find fault with that treatment; in general, just the contrary; but we are totally at a loss to see what there is in it, which, at the present day, could call for or merit publication. We owe no thanks to Dr. Venables for informing us that bleeding, and a general antiphlogistic treatment may be adopted with safety and advantage, in what, for want of a better term, we must call asthenic dropsies; it is not in clear and palpable cases, that we stand in need of illustration or instruction; if, indeed, the same quantity of paper and print had been employed in reducing the empirical treatment of dropsies in general (for it is nothing else) to something like fixed and tangible principles, the case might have been different, and instead of dealing out a few plain, unpalatable truths to Dr. Venables, we might have had the more grateful task of bestowing the praise his exertions might have deserved, and of holding up his example to be imitated, not avoided.

We have no intention of submitting the cases given by Dr. Venables, nor yet his remarks upon them, to analysis; but shall present our readers with his inferences from them, and leave them to judge whether we do wrong in refusing to admit the claim of novelty.

"From the foregoing report," he says, "I am fully authorized in deducing the following inferences.

1. "Dropsy is more frequently an active disease.
2. "When active it is generally complicated with a pyrexial or inflammatory state of the system.
3. "When dropsy depends upon inflammatory affections of the viscera, the operation of these affections is mostly indirect;

namely, through the fever which commonly accompanies such diseases.

4. " Dropsy may arise as the termination of acute and sub-acute inflammation in the serous membraesn, or in the cellular structures.

5. " Dropsy, in a very severe degree, may exist independently of any organic disease.

6. " When the cellular structures, or serous membranes, &c., are weak, either naturally from mal-conformation, from disease, or mechanical violence, the excitement of the economy during the earlier periods of pregnancy, may lead to a dropsy of the weakened parts; which, if neglected, will, under favourable circumstances, become alarming and inveterate diseases.

7. " When dropsy exists in combination with an excited state of the system, or with an inflammatory affection of any organ or texture, antiphlogistic measures, especially blood-letting and antimonials, form the most rational and effectual means of cure.

8. " A reliance on diuretics in active dropsies serves merely to debilitate the system, without curing the disease, and may even lead to diabetes.

9. " A coagulated state of the urine in dropsy generally indicates the necessity of blood-letting; but the converse of this proposition does not hold good, and the non-coagulability of the urine does not necessarily prohibit venesection."

Dr. Venables conceives that his Appendix on the Theory and Treatment of Organic Disease in general, which Appendix, by the way, forms nearly one half of the book, possesses some interest. If it does, we confess ourselves inclined to think that the degree of it is very limited, and that it must be confined in its operation almost exclusively to the person of the author. The only novelty that it can be imagined to contain, consists in the suggestion, that organic diseases may be considered as the effect rather than the causes of that general disturbance by which, to use the words of the author, we find them invariably accompanied. How far this is either new or original, we leave those to determine who are acquainted with the principle of what has been happily termed, "the constitutional origin of local diseases;" an expression that, in its extended sense, conveys in a few words an idea, in attempting to illustrate which, Dr. Venables has contrived to fill one hundred pages. Even here, however, he has drawn but very moderately on his own resources; Dr. W. Philip and Mr. Abernethy supply the text; Dr. Venables furnishes little more than the commentary.

In short, this Clinical Report on Dropsies, with its Appendix, bears every appearance of a most determined piece of book-making, and is likely to add as little in the way of honour to Dr. Venables, as his silly lecture on oxalic acid did, or as it will afford of information or instruction to his readers. We really think, that he must by this time have discovered that it would

have been on every account better, had the fire in Greville street, which he so pathetically deplores as having destroyed a former impression, induced him to postpone the appearance of the present one *sine die*; and that to have any prospect of success, the larger work on dropsies, which he suspends in *terrorem* over the profession, must be composed of very different materials.

We are far from wishing to take advantage of every point where Dr. Venables is open to attack; but we think it would have been on every principle advisable to omit such remarks as those to be found at p. 9 Pref. and p. 114 of the work itself; not to mention many others only a little less injudicious.

We submit the following queries to those whom they may interest. What sort of a person is a *wiry-looking* old woman? p. 42. What reason is there for supposing that the French term *iodure* is more correct than the English one *iodide*? See Note, p. 21.

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ART. VI. *A Treatise on Moxa, as applicable more particularly to Stiff Joints: illustrated by Cases and Plates: with some general Observations on Spinal Disease.* By JAMES BOYLE, Surgeon of the Middlesex Infirmary, &c. London, 1825.

Mr. Boyle commences by some remarks on the derivation of the word Moxa, or "the substance," as Mr. Dunglison happily terms it. After some remarks on the various origins to which it has been referred, he suggests one that appears to carry an appearance of considerable probability with it, though, in truth, the affair is not of such consequence, as in any way to merit the space which he has devoted to it.

"In a recent edition," says Mr. Boyle, of "Richardson's Dictionary of Persian, Arabic, and English, edited with great ability (1806) by Dr. Wilkins, in Vol. I. p. 881, may be found, '*muhk*, abolishing, cancelling; burning, being scorched; not having the blessing of God.' In the next page may also be found, '*mahkuk*, erased, cancelled.'

"The facility with which the Persico-Arabic language, according to the intonation with which it is spoken, assumes variety of signification, from the slightest change in the oral organs, is universally known; and as the Portuguese had the earliest communication, in the course of commerce, with the nations in which that language was universally used, it may be supposed, without a great stretch

of imagination, that they carried with them some of the most material terms of the language, to serve as a medium of communication with nations farther to the eastward. Hence, in their intercourse with the people of China, Japan, &c., the *muhk* of Arabia or Persia, might have served them to express their knowledge of that practice, which they had observed in those countries, substituting their term *moxa* for the Chinese *kieou*. This construction is clearly borne out by the fact quoted in Dr. Dunglison's introduction, before mentioned; for it is therein stated, that the word *moxa* is used by the Chinese and Japanese only before strangers, to whom they may wish to make themselves intelligible. As no such term occurs in the writings of the physicians of China or Japan, the conclusion may be fairly drawn, that the word in question was brought in by strangers, likely the Portuguese or Dutch."—pp. 5, 6, 7.

After a slight sketch of the history of the moxa, and some general remarks on the application of fire in the treatment of diseases, which the author acknowledges to have, in a great measure, derived from the resources of others, and which, we conceive, might have been just as well dispensed with, he then proceeds to give the results of his personal experience, through the medium of cases. Of these the first is the most interesting, but of such length as to deter us from attempting to transcribe it. The second is somewhat less diffuse, and is as follows:—

"Mrs. B—— had a rheumatic fever, which more particularly affected the right wrist, and caused serious injury to that joint. On being consulted, I learned that the case was of two years' standing, and that almost every surgeon of great notoriety in town, had been advised with, respecting it. Various means had been resorted to, even Mahommed's baths; in short, very nearly the same variety of practices were gone through, as in the first case; and in that, the mischievous effects of blisters were particularly conspicuous. On examination, I found flexion and extension perfect, but the rotatory motion of the fore-arm was defective; and action between the fore-arm and carpal bones was altogether wanting. The muscles were so much weakened from having been long idle, that an empty teapot could not be raised without the assistance of the other hand; nor could that particular motion be performed, which the use of the spoon requires.

"It was now, and it appears with reason, believed, that independently of thickening of the capsular ligament, the excitement of the blisters, as well as the rheumatic attack, had induced the secretion of an inordinate quantity of coagulable lymph, which being thrown between the interstices of the neighbouring muscles, greatly conduced to the rigid state of the joint. From this view of the case, it next became a consideration, what muscles were most employed in the motion of the fore-arm, which was here defective; this brought to recollection the *pronator*, *quadratus*, and *supinator radii teres*, as

the most powerful in effecting pronation and supination ; in addition to which, it was ascertained on inquiry, that during inflammation, pain was more acutely felt in the direction of the latter-named muscle, than in any other part of the fore-arm. By this, the practice was regulated, and the *moxa* was applied to these particular muscles, for the purpose of relaxing their contracted fibres, dissolving the probably long-deposited coagulable lymph, and exciting the dormant absorbents. Three or four cylinders of the composition were every day applied, and shampooing was practised for the purpose of restoring the natural rotatory action of the fore-arm and wrist. Strongly camphorated oil was applied by means of friction, and a small flannel bandage was passed, for the purpose of keeping up the increased action thus excited. In the course of three days, an amendment was perceptible ; and at the expiration of fifteen days, the powers of the arm were almost perfect : in short, nothing further appeared necessary to complete the cure but perseverance in exercising the muscles, for which instructions were given, the lady being now gone abroad."

In his opinion of the action of *moxa*, Mr. Boyle differs from Baron Larrey, whose enthusiastic recommendations, and extensive employment of it, render him one of the principal authorities on the subject. The Baron, and, we believe, most of the Continental practitioners, apply it in such a manner, and for such a length of time, as to render it actually a cautery, producing sloughing, ulceration, and suppuration. Hence, he has been induced, naturally enough, to suppose that its beneficial effects are dependent on the counter-irritation and discharge, which it is the means of exciting. Mr. Boyle, as we have already said, takes a different view of the matter.

"We have it," says he, "upon incontestible authority, in addition to mine, that the application of this remedy has been successful in removing painful affections of *nerves*, where no surrounding or secondary irritations could be detected ; and where, consequently, discharge or counter-irritation could have no particular influence. In my own practice, *the application is so mild, as not to cause the slightest abrasion of the cuticle*, and yet it effects cures, after a failure of all the known remedies in such cases ; hence it is clear, that counter-irritation or discharge is by no means a necessary attendant upon its general employment. It appears to me, that there are cases in which *moxa* may be more serviceable, by inducing secondary inflammation, than if the application had been mild ; but I believe, that in nineteen cases out of twenty, in which the propriety of that remedy is fully indicated, the supervention of local inflammation would be highly unfavourable to the success of the operation."—pp. 88, 89.

As a proof of the comparative mildness of the treatment adopted by Mr. Boyle, he mentions that in one of the cases, the period of breakfasting was selected by the patient, a lady, for

the application of the remedy. The good effects of moxa, if employed, Mr. Boyle seems inclined to refer to the consequent increase of absorption.

"The very rapid manner in which chronic swellings have been observed to subside, after two or three applications of moxa, scarcely causing discoloration of the part acted upon, decidedly proves that increased absorption is the sole cause of such change. It appears, under these circumstances, that the heat is just sufficient to dissolve recently organized parts, from deposition of coagulated lymph, or morbid thickening of cellular substance, without affecting the circulation; that the absorbents, from the texture of the coats being so much more delicate, and being consequently more sensitive than those of the arteries, are stimulated with greater facility, and will take on a new action from the operation of a cause which would have no influence over the latter."—p. 92.

Mr. Boyle considers, that the number of moxa cylinders employed, and the duration of their application, should be regulated by the magnitude of the joint, or other part affected, as well as by the degree of individual susceptibility, and the duration of the complaint. He has also ventured to apply it in the vicinity of parts on which Baron Larrey has prohibited its use—such for instance, as tendons and glands. It must not be forgotten, however, that the moxa is a very different agent in the hands of Mr. Boyle and of the Baron. As applied by the latter, it is a powerful cautery, producing much pain, sloughing, and ulceration; with the former, on the contrary, it is simply a local stimulant, producing a gentle irritation, which may be regulated at pleasure.

As to the mode of application, little explanation is necessary. Various substances have been employed, under the general term moxa, for an account of which we must refer to the work itself. That which Mr. Boyle recommends we shall quote, to enable those of our readers who may be so inclined, to repeat his trial for themselves. It is prepared by dissolving an ounce of nitre in a quart of water, and therein saturating a quantity of fine cotton wadding, which being dried and formed into small parcels, is inclosed within paper cylinders, about half an inch in diameter, and one inch in height. It burns in an extremely slow and gentle manner, and only requires being kept dry, to be fit for use at all times.

In preference to any other instrument, Mr. Boyle uses a pair of common dressing forceps, by means of which, the moxa may be held at the distance required by the opinion of the surgeon or the feelings of the patient. It is sometimes convenient to place a piece of plaster on the skin, with an opening in the centre, in order to guard against the falling of sparks. The

cylinder is to be taken with the forceps, lighted at both ends, and applied within about an inch and a half of the skin, more or less, the burning being kept up by the breath, or the use of a blowpipe. After the application, the parts are to be rubbed with camphorated liniment.

We must decline noticing the remarks on the treatment of diseases of the joints, which, though concise, are generally judicious. As to the main topic, the use of moxa, we conceive that Mr. Boyle has brought forward sufficient proofs of its efficacy, and, at the same time, has done a great deal to promote its general adoption, by showing that the severity of the treatment, which has excited general aversion to the remedy in this country, is by no means essential towards securing its beneficial effects.

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ART. VII. *A Treatise on Syphilis, exhibiting the advantages of large doses of the Submuriate of Mercury, in the cure of that Disease: also an Inquiry into the modus operandi of Mercury, illustrated by Experiments.* By JAMES BOYLE, Esq. &c. &c. London, 1824. pp. 178.

Syphilis, which made its appearance in Europe, in great force, towards the close of the fifteenth century, is generally supposed to have had an American origin. This supposition, however, is doubted by some authors. Certain it is, that in the first chapter of the twenty-sixth book of Pliny, several diseases are mentioned, that might be attributed to a venereal origin; and we there learn that new diseases not unfrequently appeared at Rome, which were universally said to have been imported from foreign countries. We may add, likewise, that the diseases of the generative organs, mentioned by Galen, are extremely numerous. Nor do the generality of the writers of the fifteenth century, assign to it a Transatlantic origin; Fracastoro, indeed, has done so, but rather for the sake of poetical embellishment, than in conformity to truth. It is named morbus Gallicus, by Almenar, a Spaniard, and morbus Hispanus, by Sylvatico, a Milanese; Nicole Gelles, in his *Croniques de France*, calls it *la maladie de Naples*, and *la grand gorre*, and says that it was not known in France, till the return of Charles VIII. from Italy. He adds, *C'est (comme il est à conjecturer) une punition de Dieu, pour le commun peche de luxure: car elle ne se prend que par paillardise communement.* This writer, who died about the year 1550, has not made the most distant allusion to its American origin.



But we now turn to Mr. Boyle. At the outset of his *Treatise*, he enters into the question of the identity or non-identity of Syphilis and Gonorrhœa, and has advocated the latter at some length. After examining the opinions of Mr. John Hunter, and Mr. Foot, he observes :—

“ That these diseases are of a decidedly different nature, I refer the reader for further proof, to Mr. Benjamin Bell’s very conclusive experiments.

“ But before I take leave of this subject, I beg to give it as my opinion, that in all cases of true venereal chancre, the disease is constitutional before it appears locally : that is to say, that absorption of the poison had actually taken place previously to the ulcerative process ; and that such change in otherwise healthy parts, is a proof of the constitutional affection, and not a cause of it.

“ I am also of opinion,” he adds, “ that no bubo should be pronounced venereal, unless it be accompanied, or soon after followed by a sore.

“ And as far as my practical testimony goes, I can safely aver, that of a very great number of swellings in the groin, without a sore at the time, or soon after, which have come under my observation, I have never seen one which required mercury for its removal.”

If constitutional symptoms follow, they must be occasioned, he thinks, by a certain idiosyncrasy, or by the improper use of that medicine.

Mr. Boyle next speaks of the treatment of the venereal disease without mercury, a subject which, he says, it would be unpardonable to pass over in silence, as it has been in the hands of accurate and able men. The same mode of cure was employed three hundred years ago, and mercury was not used, unless the internal parts were attacked by the disease ; as is clearly indicated by the following passage of Alexander Trajanus Petronius (Aphrod. p. 1289). “ Hujus (mercurii) igitur administrandi occasio tunc erit, cum morbus contra suæ naturæ impetum ad interne feratur, et carnes juxta ac ossa depascit, omneque aliud curationis genus effugit, neque decocto guaiaci ligni, neque sarsaparillæ neque radice chinæ obedit.”

“ I am quite satisfied,” says Mr. Boyle, “ that in the East Indies, the natives cure the disease without the use of mercury. They are in the habit of giving some sudorific vegetable composition, during the administration of which, the patient is confined to his house or hut, for the purpose of warmth ; and his body is covered with a peculiar kind of paste, or cement, to prevent the air acting upon the pores of the skin. So much, and so much only, could I learn respecting this extraordinary mode of treatment.”

This recalls to our remembrance, the fellow mentioned by Schenckius, who got rid of the disease, by wrapping himself

up, for some time, in a mixture or paste of horse dung and urine.

Our author takes notice that Mr. Rose, an *anti-mercurialist*, has said, that nodes and caries do not occur oftener in Spain and Portugal, where no mercury is used to cure syphilis, than in other countries; and then adds:—

“And why should they,” I would ask, “since the same practice, or no practice at all, too frequently exposes the unfortunate patients to the same results in almost every country? For my own part, I have often been distressed in witnessing the numberless wretches whom I have seen in a state of lingering misery, from various forms of secondary symptoms. And the cases which I have had an opportunity of seeing in England, France, Spain, Italy, East and West Indies, and Africa, are not a few. I may also observe, that were I, from all those opportunities, to form a comparison, I might safely say, the inhabitants of the Portuguese islands abroad, rank first as victims to the sequelæ of the venereal disease, whether arising from bad treatment, or total neglect of every system. This circumstance, have always supposed, depended on such Portuguese being unable to obtain or follow up proper medical advice.”

After commenting on the observations of Dr. Thomson, and Messrs. Rose, Guthrie, and Bacot, Mr. Boyle takes the opportunity of thus hinting at his own favourite practice.

“Now really,” he says, “on the most impartial and cool reflection, I think the writers in favour of the new practice, as it is called, have themselves given evidence whereby to condemn it; for, admitting the point of contention, that the disease may be cured without mercury, what man in his *sober senses* would feel disposed to suffer a chance upon him from one to three months, with the additional prospect of being soon after a still longer time under medical discipline, or what usually follows, ulcerated sore-throat, copper-coloured spots on the skin, nodes, diseased bones, &c. &c.; when, as I propose to prove, the complaint, in the first instance, may be radically cured in a few days.

“Cases,” he continues, “every day occur, where it would be presumption confidently to assert, that they were, or were not, venereal. I, therefore, when thus doubtfully situated, am in the habit of trying for a few days, whether it be possible, by means of simple applications, to heal the sores, or bring on a healthy action in them; but should I fail in this, I do not consider it owing to their being decidedly venereal; yet I deem it prudent to administer mercury, for the purpose of securing the constitution against that disease, or what appears to be equally bad, a *pseudo-syphilitic* one.”

Mr. Brodie has frequently met with what appeared to be venereal sores, which healed without mercury; but in such cases, the patients usually returned to him with secondary symptoms.

“After all,” says Mr. Boyle, “to prove that the venereal disease, in every form, is to be cured without the use of mercury,

would be gratifying and important knowledge ; but the total exclusion of this medicine, in consequence, I hesitate not to say, would be attended with the worst results."

For our part, we cannot see how this could happen, if the disease were *completely cured*.

The bubo, the next object of our author's observations, is by no means, as he very properly remarks, a characteristic of syphilis, as it may arise from many other causes. The antiphlogistic treatment of sympathetic buboes is well known ; but afterwards,

"Should indolent hardness remain, evaporating lotions, hot fomentations, or even hot poultices, may be applied : experience having taught us, that warmth does not always favour the process of suppuration. On the contrary, it is well established, and I believe the idea originated with Mr. Brodie, that heat will invariably direct its influence to the course upon which nature has determined ; and that it will expedite that process, whether it be resolution or suppuration.

"Sometimes a bubo becomes stationary : under such circumstances, camphorated mercurial ointment, or camphorated spirits, applied to it with a moderately tight passed bandage, will be found most serviceable. When matter unavoidably forms, evacuating it by means of the lancet, is decidedly preferable to caustic ; as in the latter way, or when the tumour breaks of itself, a ragged, ill-conditioned sore is generally the consequence."

The latter part of this information might have been spared, though it is quite true ; and also what follows, that bark, &c. will tend to improve the patient's appetite, and restore the tone of his digestive organs.

In the treatment of phagedenic chancres, practitioners differ, some favouring the use of mercury, others condemning it.

"The propriety of stimulants," our author observes, "is obvious, although they occasionally get into disrepute, either through partial application, or being in themselves of a feeble nature. My own opportunities of observing upon sloughing ulcers generally, have confirmed me in this opinion ; and I have seen large doses of the submuriate of mercury cause a line of separation between the sound and unsound parts, when various lauded remedies proved to be entirely useless."

"In a venereal sloughing ulcer, we have two objects in view ; one, to stop the progress of a local affection ; the other, to eradicate a systematic or constitutional disease, of which the former is symptomatic only. If both these circumstances can be effected at the same time, no one surely will object to the propriety of the measure : this, on the contrary, should be the grand object ; and analogy, I think, bears me out in a confident opinion, that large doses of the submuriate of mercury are best calculated to effect those important and especial purposes."

In such cases, when scrofula is in the constitution, Mr. Boyle informs us, that "mercury either does not operate at all, or produces effects of a very different nature from those intended."

He then ridicules the ideas of authors upon this subject, and favours us with the following opinions of his own, which we give in his own words, as we do not find them susceptible of abridgment:—

"Scrofula," he says, "being a disease of the glands, they of course are very highly susceptible in a patient affected with this complaint; and, when stimulated by mercury, will naturally become enlarged and inflamed, pressing upon the lymphatics, and obstructing the fluid which these vessels, under ordinary circumstances, contain. The absorbents being thus deprived of their inherent power of action, an immediate deposition between the interstices of the cellular substance in the neighbourhood of the glands, becomes inevitable. A degree of enlargement, inflammation, and perhaps suppuration, or even gangrene, in the parts, will next follow. The diseased action will continue till the morbid state of the glands, and the pressure arising from thence, and accumulated fluids in the absorbents, are removed; whether directly by this peculiar action upon a contiguous part, or general relaxation of the system, excited locally by an open and discharging sore.

"So it is, then, when sedative applications to scrofulous or sloughing sores, however induced, act favourably, that favourable action is through the medium of the glands; and when stimulants, whether exhibited internally, or externally applied, tend to a favourable result, that favourable result is effected through the medium of the absorbents, by a temporarily increased impulse to their natural qualities of absorption.

"From this view of the subject it is clear, that where it becomes necessary to administer mercury in a scrofulous habit, the sooner the constitution is affected, and the disease is cured by that medicine, the less mischievous will be the effects of the remedy; for, as I shall further show, it is when the system is brought under the influence of mercury, by means of small doses, that this medicine acts most as an irritant. If, therefore, swelling and inflammation of the glands of the groin shall have taken place, previously to the exhibition of mercury, it were advisable, first, to remove or lessen this particular state, by such measures as may appear applicable to the nature and degree of the affection; then the constitution, if I may so express myself, should be surprised by such dose or doses of mercury, as will effectually saturate the system, before sufficient time has elapsed for the conjoint operation of the disease and the remedy, to impede those functional movements, upon which the re-establishment of healthy action in the affected parts entirely depends."—pp. 40, 43.

The *modus operandi* of mercury is another subject on which some of our acutest writers have laboured to little purpose; the

opinions of Hunter, Duncan, and Swediaur, according to our author, being all equally lame and inconclusive. On that account, he has himself attempted its investigation, in the following passages, which we extract for the benefit of our readers :—

“ The late Dr. Darwin,” he observes, “ maintained that mercury, administered in any way, in syphilitic complaints, acted and produced its effects, merely by inducing absorption of the matter, from syphilitic sores or ulcers. This I have considered for years to be the case, and until very lately, I was not aware that the same idea had ever struck any one but myself : it remains, however, to be shown, in what manner the constitution frees itself of the matter thus absorbed.

“ It is a well known fact, that mercury, carried to the extent of ptyalism, increases the action of all the glands of the body ; and that this action is particularly conspicuous in the salivary glands, the liver, and the kidneys ; that nature has the power of freeing herself of all redundant humours, by means of secretions and excretions ; that by this natural process, the superabundant fluids are carried from the circulating mass, to make room for new and healthy blood.

“ It being evident, then, that under ordinary circumstances, this process supports the equilibrium of healthy action in the system ; that the venereal disease is cured by mercury ; and that the test of its operation is characterized by an increased action in all the secreting organs ; it follows, that in this way, and in this way only, is the blood and the constitution freed of poisonous matter, however generated. In the first instance, the mercury acts as a stimulus to the absorbents, as spoken of before, and as is proved by the very rapid healing of the sores : secondly, it determines its action to the glands, where the business is completed by an increased impulse to their natural action.

“ This, in the cure of every disease wherein mercury is an agent, is undoubtedly its mode of action.

“ It is said we are quite unable to explain the immediate action of mercury upon the *venereal poison* :—this is evidently the case, and must be so, if I am right in an opinion, that the cure is always effected, independently of any direct connexion between the mercury and the poison. It is well known, that the cure of the disease can be effected by mercury in whatever way administered : whether this medicine be pushed through the affected part by means of dressings, or whether it be conveyed into the constitution by the mouth, by injection, fumigation, or friction, in each and every case, though not to the same extent, it retains its specific antiveneereal powers. Hence the absurdity of supposing, that the medicine acted chemically, by coming in immediate contact with the poison. No ; I repeat it, and the assertion is demonstrable ; nay, I might presume, nearly demonstrated, that mercury acts in the cure of the venereal, as it does in the cure of every other disease, namely, by keeping up an increased action in the glands, whereby a more than

ordinary secretion is carried on, till the system becomes freed from poisonous, extraneous, or irritating matter, whatever be its nature, or however it be induced. And the following observation tends further to strengthen this argument :—

“ It frequently happens in *advanced stages* of disease, that mercury is administered as our only hope ; and affecting the system by means of it, is the object in view ; when, if ptyalism, or a flow of saliva, be excited, the patient almost invariably recovers. But if, on the contrary, a *sore mouth*, that is to say, ulcerated gums, &c. take place, and that it is impossible to establish ptyalism by perseverance in increased quantities of mercury, there is, I believe, no hope of the patient's recovery. I have seen a great many such cases, and they all terminated fatally. Here, in the latter instance, the constitution is evidently charged with mercury ; but owing to a great degree of functional or structural disease in the glandular system, as is proved by the impossibility of inducing a flow of saliva, the medicine fails to effect its grand curative revolution.”—pp. 55-59.

Mr. Boyle next dwells, for some time, on the anomalous effects of mercury, and gives a number of instructive little stories to shew, that “ long-continued, small, irritating doses” of mercury, act as a poison, and gradually unhinge “ all the important organs, till at length the vital spark is annihilated.”

It has been imagined by some persons, that the exhibition of *large doses* of calomel is the most likely means of exciting a profuse salivation ; and it has been thought, that calomel will purge in proportion to its dose. But Mr. Boyle informs us, that large doses of calomel never cause great purging.

“ And as relates to violent ptyalism, I can safely aver,” he observes, “ from pretty extensive experience, such a state is infinitely less common from large doses of calomel, than from a protracted course of mercury, in whatever form exhibited. These circumstances have been well and long known to public practitioners in the army and navy, employed in tropical countries ; and the same system of exhibiting mercury in urgent cases, has occasionally been followed in our climate.

“ But a very few years ago, however, practitioners generally would have been shocked with the very idea of a scruple dose of calomel ; and even now in France, such doses excite fear and wonder.”—pp. 68, 69.

And yet, an hundred years ago, Freind was in the practice of giving scruple doses of calomel in amenorrhœa.

We now come to the experiments which our author made, with calomel and corrosive sublimate, on dogs. Scruple and two drachm doses were given, and some of them repeatedly. These experiments, as they stand in Mr. Boyle's book, we think it needless to extract, and shall merely give the result.

— “ The most important part of the inquiry,” he observes, “ for

which experiments were deemed necessary, was made to prove, whether a very large dose of calomel was capable of acting directly or indirectly as a poison; and I think it has been satisfactorily shown, by the instances recorded, that no fatal result is to be apprehended from calomel, however extravagant the dose. And that death, in every case of the foregoing experiments, with the exception of the last, was from inanition; the animals having all lived as long as they could have done, without food, if even no mercury had been given. The loss of appetite, and traces of inflammation, were universal, and decidedly attributable to the mercury; the former directly, and the latter indirectly; the inflammatory state arising more particularly from the medicine predisposing to cold. In all these cases, however, even approaching to dissolution, life might have been preserved by conveying food into the stomach, and providing against the consequences of damp and moisture; measures which common sense would always dictate the propriety of in man."—pp. 91, 92.

In none of these cases, were any of the nerves affected with inflammation, though our author and his friend, Mr. Reid, examined them very carefully with the microscope. He allows, however, that the nervous system suffers very considerably from the abuse of mercury; but he considers it as "a never varying fact, that nervous influence is the result of means not visible."

Speaking of measures preparatory to the administration of mercury, he observes, that in the generality of venereal complaints, they are neither proper nor necessary; if we except blood-letting, which may be used with advantage, when the patient is of a very robust habit.

Mr. Boyle now enters upon a field which is more peculiarly his own, the quantity of mercury to be employed in the cure of syphilis.

"We are not acquainted," he says, "with any disease, except the venereal, wherein it is previously pronounced that the patient must be a certain time under cure; in fact, it is a great object with us, in every other complaint, to effect a cure as quickly as possible. What would be said of a practitioner who would hold out the necessity of occasionally, during a number of weeks, bleeding a patient for the cure of fever, whose inflammatory state, every one connected with medicine is aware, might be overcome with greater ease and safety on the first or second day of the attack, than at any subsequent period? I am acquainted with gentlemen of considerable professional fame, who say it is one of their maxims to avoid salivation if possible; but these very gentlemen, acknowledging mercury to be the specific, will say, if interrogated, that saturating the system is their object: they may be brought to confess too, that salivation is a test of saturation; and that their patients sometimes become accidentally salivated; when, it is true, chancres ap-

pear to heal more rapidly in consequence ; yet they deny that this is curing the disease effectually. My own opinion, however, is, and it would be difficult to persuade me to the contrary, that the disappearance of the symptoms of any disease, is the most important step towards curing it.

"If, for example, two patients, under precisely the same circumstances, entered on means of cure at the same time ; the one shall be put under a five weeks course of mercury, so conducted as to make the mouth sensibly affected at the end of that time, at which time also his sores or other venereal symptoms shall have disappeared. The other patient's mouth shall be affected in two days, his sores heal in four or five after, and the salivary glands continue in a state of excitation for six or eight days more. I ask, which of these patients is likely to suffer most from the effects of the disease and the remedy ? why assuredly, if we admit the venereal to be a disease capable of acting upon the constitution generally, we can have no hesitation in saying, the sooner that power is destroyed the less injurious will be its effects on that constitution ; and the reverse of this, on procrastination. Had Mr. Hunter's opinions, in this respect, been more attended to than his theories respecting other parts of the subject, we should, long ago, have had a more fixed and expeditious plan of practice."—pp. 100-103.

Then noticing some statements of Mr. Hunter, Mr. B. Bell, and Mr. Geoghegan's, he observes—

"Nothing can be more abusive and glaringly inconsistent, than the practice of administering small and ineffectual doses of mercury, in the cure of venereal ; allowing the constitution to become habituated to its use, and consequently insensible to the action of the specific ; whilst the disease and debility are extending with destructive strides."—p. 106.

After several other remarks upon the same subject, he adds—

"In fine, I became impressed with an opinion, that the most expeditious mode of treating *syphilis* must be the most effectual and simple ; in this opinion, large doses of calomel readily suggested themselves ; and the following cases will, perhaps, appear a pretty fair specimen whereby to judge how far I have or have not succeeded in my expectations of the advantages arising from this mode of treatment."—pp. 109, 110.

These cases are twenty-one in number, and it must be allowed that they exhibit a rapidity of cure, without preparation, and with little or no confinement, altogether unprecedented. They occurred both in Europe and in the East Indies. Besides his own, he gives the testimony of his friends, Messrs. Bowen, Cunningham, and Reid, all in favour of the same practice.

We ought, perhaps, to have given some of our author's cases as a specimen of the rest, but we think it much better to extract a part of his friend, Mr. Thomas Reid's letter. This gen-



tleman writes with energy and intelligence, and seems to have carried the practice farther even than Mr. Boyle.

"I remember," says he, "a case of chancre that came under my care in the Mediterranean, about ten years ago, which I attempted to cure without mercury, and for some time things went on very well; the sore was nearly healed, and some of the inguinal glands, which at one time threatened to suppurate, had got quite well; when all at once, at least within twelve hours, the sore assumed a sloughy appearance, and in twenty-four hours more, the most malignant ulcer, emphatically termed *black lion*, became fully established, without any apparent deterioration of the patient's general health. Various powerful measures were employed to arrest the rapid progress of this frightful intruder, but in vain. At the end of four days, the ulcer had extended so widely and deeply as to induce serious apprehension for the safety of the glans penis, behind which the chancre first made its appearance. I did not think I should be justified to carry the experiment further; therefore, I sprinkled the ulcer with calomel, applied a bit of dry lint, and directed a carrot poultice to be put on every three hours. *Half a drachm* of calomel was given in a little brown sugar; and two drachms of strong mercurial ointment ordered to be rubbed into both the thighs. This process occupied the greater part of the day; but it was performed faithfully. In the evening, the ulcer looked truly frightful;—*two scruples* of calomel were given, and another drachm of the ointment to be rubbed in: the ulcer was dressed as before.

"The next morning matters wore a better aspect; the patient had fallen asleep rubbing in the ointment, and did not wake till daylight. He was sensible of a slight brassy taste in his mouth; his bowels had been moved *once only*; and he had voided an unusually large quantity of urine. The ravages of the *black lion* were then at an end; the inflammation of the penis took on the erysipelatous character, in a slight degree, and did not entirely subside for several days; but the sloughs separated easily, and the ulcer healed in a reasonable time. In this case, I remember very distinctly, that so far from the large doses of calomel exciting violent purging, they only produced one motion; their action was decidedly and directly sedative; and it afterwards required brisk purgatives to restore the intestines to their healthy action.

"Another case, very similar to the foregoing, occurred to me at Calcutta, in the year 1817. In this, the attempt to cure without mercury was carried somewhat further; but I have made up my mind never again to try the experiment; I was obliged to give the patient *five scruples* of calomel in twenty-seven hours."—pp. 150-153.

Mr. Reid asserts, that there are many cases of true chancre, that can be cured without mercury; he having met with several constitutions that could not bear that remedy in any form; but he says, that he is

"Quite satisfied that scruple doses of calomel will cure the dis-

ease in far less time, and with far less inconveniences to the patient than any other with which we are at present acquainted."

However highly Mr. Boyle estimates the above practice, he has good sense enough to say, that it is only in the hands of the profession that it can be available, as otherwise, the curative operation of the mercury cannot be ascertained. For the last six years he has not known one case of secondary symptoms, and he has had ample opportunity of knowing the history of his patients. But with regard to the sores which occur on the genitals, he thinks it extremely difficult, or even impossible, to distinguish, by inspection, those that resemble, from those that are in reality syphilitic. He holds it as a *general rule*, however, that "attentive inquiry will almost always enable us to decide correctly." In doubtful cases, he advises us to have recourse to mercury.

"I feel confident," he says, "in the assertion, that if by one dose of mercury the mouth in one night were affected, and the venereal symptoms, for which that dose was given, disappeared immediately after, the state of the salivary glands indicating a continuation of mercurial action for four or five days, the case might safely be pronounced one most effectually cured."

For the purpose of restraining the purgative effects of the calomel, opium, he is of opinion, should never be given with it in greater quantity than from half a grain, to a grain and a half.

"The circumstances," Mr. Boyle remarks, "which are unfavourable to the action of mercury, consist chiefly in the patient's living freely, and taking much exercise in the open air; whilst, on the contrary, quiet, warm clothing, low living, and even confinement to bed, under particular circumstances, will be found the grand *desiderata* when expedition is an object."

In conclusion, he promises a work "on secondary symptoms, and those which arise from the abuse of mercury."

We have now nearly done with Mr. Boyle. A deficiency of words is certainly not of the number of his failings; but he has not yet learnt to arrange his words with elegance and precision, nor is he at all times attentive to the niceties of grammar; a few such expressions as the following, having occurred to us in our perusal of his work; "the slow administration of small doses of mercury are [is] usually productive." p. 36. And scanty indeed must have been his classical education, if *primum mobile*, p. 44, for *primum mobile*, and *cadavre*, as if it were a French word, for cadaver, be not errors of the press.

It may here be proper to observe, that he might undoubtedly have given all that is useful in the volume in a much smaller

compass; but the mode we have adopted in reviewing it, is fairer for the author, and will enable the reader to judge more correctly of its merits. Upon the whole, no great fault can be found with Mr. Boyle's matter; but we do think that he would have done well to have omitted entirely his pæderastic remarks.

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ART. VIII. *Clinique Medicale, ou choix des Observations recueillies à la Clinique de M. Lermnier, Medecin de l'Hopital de la Charité et publiées sous ses yeux.* Par G. ANDRAL, Fils. Tome II. Maladies de la Poitrine. Paris, 1824.

We have great pleasure in directing the attention of our readers to the volume before us. M. Andral, junior, has already established his character as a man of talent, and an accurate pathologist, by his description of the morbid appearances of the gastro-intestinal mucous membrane, and by the first volume of the "*Clinique Medicale*." The present volume forms a valuable addition to the pathology of the chest. Combining a talent for minute and patient observation of morbid appearances, with ingenious pathological reasoning, its author will not shrink from comparison with the most eminent writers in this department, of which the French school so justly boasts. The facts he records supply many of the lacunæ left by MM. Bayle and Laennec, in the pathology of the organs of respiration. They also enable us to form a more impartial estimate than hitherto, of the real value of the diagnostic instrument, contrived by the latter, at least, so far as diseases affecting respiration are concerned. Equally free from indiscriminate scepticism, or (on a subject of so great practical moment) that still more unpardonable indifference, so generally prevalent in this country; and on the other hand, superior to the indiscriminate zeal of a partizan, or the slavish credulity of a pupil, M. Andral has observed for himself, and judged for himself, on the value and merits of the stethoscope in the diagnosis of the different diseases that come under his review. The present volume is entirely devoted to diseases affecting the organs of respiration, which are arranged under three heads, corresponding to the three pulmonary tissues:—1st, diseases affecting the lining bronchial membrane; 2d, affections seated in the parenchymatous structure of the lungs; and 3d, in the pleura. We shall present our readers with an abstract of

our author's most important observations on these different subjects in their order; only premising, that he does not profess to give a *complete* history of the diseases of which he treats; but rather records a series of original observations made at the bedside, and on the dead body, arranged, for the sake of perspicuity, under the above heads.

I. *Bronchial Affections.*—Commencing with the *organic* changes induced by inflammation in the pulmonary lining membrane, we are informed, that when a person, labouring under recent bronchitis in a mild form, dies from any other disease, redness is found in a portion of the mucous membrane, generally circumscribed, and near the termination of the trachea, or in the *larger* bronchiæ. In more intense inflammation, the redness is more extensive, and occupies even the minutest bronchial ramifications. It is sometimes strictly limited to the bronchiæ of a single lobe, which is most frequently the superior. The redness may depend on a crowd of minute vessels, ramifying both on the surface of the mucous membrane, and in the subjacent cellular tissue; or there may be no distinct vessels, but merely a crowd of minute red points or dots; or lastly, there may be a uniform uninterrupted red blush, like that of erysipelatous inflammation. Sometimes, as is common in inflammation of the intestines, there are a number of distinct inflamed patches, the intervening spaces being natural.

In *chronic* bronchitis, the membrane is seldom bright red, but frequently presents a livid, violet, or brownish hue. In a considerable number of cases, however, presenting all the characters of inveterate chronic bronchitis, with purulent expectoration, the membrane is found perfectly pale throughout its whole extent; a fact previously noticed by Bayle, and which is analogous to the appearances left by chronic and even acute inflammation in its latter stage, in many of the other membranes, both serous and mucous.

Ulceration of the pulmonary mucous membrane is not of frequent occurrence. Most common in the larynx, it diminishes in frequency as we descend to the trachea, and in the bronchiæ is extremely rare. M. Andral has met with it in this latter situation only twice; in both cases, the ulcers were small, circular, and defined, with elevated edges; in one, it was indicated by the common symptoms of chronic bronchitis, in the other, it was concomitant with diseased heart, and accompanied with violent fits of coughing, and expectoration of reddened *sputa*.

Thickening of the coats of the bronchial canals, producing stricture or diminution of their calibre, is another, and not unfrequent, effect of inflammation, and may be seated either in their

mucous membrane, or ligamentous structure: This thickening of the mucous membrane may be so considerable, as nearly or wholly to obliterate the cavity even of the larger trunks. In one remarkable case, the principal branch going to the right superior lobe was found so much contracted near its origin, as to admit with difficulty the point of a fine probe. The stricture consisted wholly in a thickened state of the mucous membrane, the fibrous tunic being natural. It was of small extent, and terminated abruptly, the tube immediately resuming its former diameter. During life, as may be readily conceived, no distinct sign could be obtained from percussion (the integuments of the thorax were however œdematous). Auscultation revealed a diminution of the respiratory murmur throughout the whole extent of the affected lobe; a sign, however, by no means characteristic of the affection in question, but common to several others, which produce changes in the mechanical condition of these canals. Finally, this patient had a strongly marked sense of constriction, referred distinctly to the affected part of the chest; he observed that he "felt as if he did not breathe by the right side;" sensations, however, which it is proper to know, are not peculiar to this affection, but may be produced by whatever cause prevents the free ingress of air into any part of the lungs. Contraction of the bronchial tube is sometimes, though not always, indicated by a peculiar modification of the respiratory murmur, called by M. Laennec "*râle ronflant*," and by M. Andral "*râle bronchique sec*," in contradistinction to the peculiar rattling noise produced by effused mucus.

*Dilatation* of the bronchiæ is a frequent consequence, or at least concomitant, with chronic inflammation. For the discovery and accurate description of this morbid state, we are indebted to the pathological acumen of M. Laennec. He had, however, very few opportunities of observing it. The vacuum he has necessarily left in its history has been ably filled up by a series of interesting cases and dissections, by M. Andral. For the detail of these we refer to the work itself, as our limits admit of only a general sketch of the results. Bronchial dilatations then, viewed either in relation to morbid structure or to symptoms, may be reduced to three varieties: 1st. one or more of the bronchiæ presents throughout its whole extent a uniform increase of calibre. Thus we find the branches formed by the fourth, fifth, or sixth subdivision of the bronchial trunk of either lung, to equal, or even exceed, the diameter of the trunk itself. This is an extreme case; generally the dilatation is by no means so great. Sometimes the dilatation is confined to a single branch, sometimes it extends to several collateral

branches, or to all those of one lobe. This species of dilatation is less opposite in its nature to *contraction* of the bronchiæ than at first sight appears. It is not a mere passive or mechanical result of distension from habitual coughing, or the accumulation of mucus; on the contrary, the walls are often thicker than in the healthy state; the mucous membrane is augmented in firmness and density, and is sometimes ulcerated; the ligamentous or fibrous coat, which in the healthy condition of the smaller bronchiæ is very fine and thin, has become firm and thick; and the cartilages which should here appear in the form of minute insulated granules, are more fully developed; in short, the whole affected vessels have undergone what John Hunter would have called "an act of dilatation," analogous to the active aneurism of Corvisart, or the "*hypertrophie avec dilatation*" of Laennec and the recent French pathologists. This species of dilatation when slight in degree, or of small extent, can with difficulty be detected by any symptom during life. When more extensive it is indicated by a set of sufficiently characteristic symptoms. It gives rise to that peculiar resonance of the voice, as heard through the stethoscope, called *pectoriloquism*, which is also one of the leading signs of tubercular excavations; sometimes, also, there is heard a very distinct mucous rattle, similar to the gurgling noise heard in tubercular cavities filled with fluid; sometimes instead of this, there is that peculiar *puffing* noise, heard in *empty* tubercular cavities. In the *second* variety of bronchial dilatation, instead of a uniform expansion of one or more bronchial canals throughout their whole extent, the walls of one of the bronchiæ are suddenly dilated into a circumscribed pouch, which is sometimes as large as a nut, and compresses the surrounding cellular texture. This cavity might at first sight be mistaken for an empty tubercular excavation, communicating with one of the bronchiæ; but on more minute examination, it is discovered to be simply a *dilatation*; both the mucous membrane and fibrous structure are recognized as entering into its composition; and instead of forming a cul de sac, it gives off numerous branches, the minute orifices of which are, on careful inspection, discovered on its inner surface. The diagnostic of this species varies in difficulty according to its size and situation; and the modifications, both of respiration and voice, to which it gives rise, resembling closely those of a tubercular excavation, there is a possibility of confounding the two affections. In the *third* variety of bronchial dilatation one bronchial tube, when traced through its whole extent, presents a knotted appearance, owing to a series of alternate dilatations and contractions. When a portion of lung

thus affected, is cut in different directions, the cut surfaces appear as if studded with numerous small white tumours which, when laid open, are found to be small cavities filled with pus, and continuous with the minute bronchiæ, of which they are manifestly dilatations. The walls of the cavity in this third species of dilatation are not thicker, but thinner than in their natural condition; and M. Andral considers it as the mechanical result of distension from mucus or pus. Auscultation, it may readily be conceived, throws no light on the existence of this form of the disease.

M. Andral next considers the changes induced by inflammation, in the bronchial *secretion*. In the incipient stage of acute bronchial inflammation the cough is dry, except in those persons who, even during health, have an expectoration from the bronchial membrane, or those previously affected with chronic catarrh or bronchitis. At the termination of an uncertain period; each fit of coughing is followed by the expectoration of a clear, transparent, glairy, mucus, like white of egg. It is very tenacious, and when poured from one glass into another, flows in a continued mass. It may be drawn out into thin threads, and in water, sometimes assumes the form of a fine thready web. When the cough is very severe, accompanied with much sense of heat within the chest, with marked oppression, and great general anxiety, the sputa become extremely viscid and tenacious, being detached with difficulty from the sides of the glass, and approach in appearance the gelatinous sputa of acute pneumonia. When bronchitis is attended with much fever, the expectorated matter becomes more viscid during the period of febrile exacerbation; by inattention to which circumstance, this appearance of the sputa might cause the case to be mistaken for pneumonia, or inflammation of the parenchymatous structure. Sometimes, at the close of the exacerbation, the sputa become thick and opaque, as in the last stage of the disease, but after its termination, they again become limpid and glairy as before, thus presenting, during a single paroxysm, all the changes which they undergo during the course of the disease.

The froth which frequently appears on the surface of the sputa, is produced by the frequent and forcible agitation of the air against the mucus contained in the bronchiæ, and appears proportioned in quantity to the difficulty with which the expectoration takes place. The sputa are sometimes marked with blood, in the form of small streaks, arising from minute vessels ruptured during the cough. It is partly mixed with the mucus, but not thoroughly incorporated with it as in acute pneumonia.

As the disease advances towards resolution, the mucus gradually loses its transparency; small opaque masses of a white, yellowish; or greenish colour appear swimming in it; these gradually increase in size, and at last constitute the whole of the sputa. This occurrence, called by the ancients, according to the doctrines of the humoral pathology, coction, generally indicates the resolution of the inflammation, and is attended by a marked remission of the symptoms. In a few cases, however, of intense bronchial inflammation, resolution has taken place, the sputa retaining the transparent glairy form of the first stage. When acute bronchitis passes into the chronic form, the sputa continues to resemble those of the latter stage of the former affection.

Bronchitis may be prolonged to an indefinite period, in a form nearly resembling the acute, marked by painful cough, sense of heat, uneasiness within the chest, and more or less fever. The expectorated mucus, in such cases, continues to resemble that of the first stage. When, during the febrile exacerbation, the expectoration is suppressed, an increase of inflammation generally follows. In general, the matter expectorated in chronic bronchitis is inodorous; in a few cases, however, it is extremely foetid. In three of these, recorded by M. Andral, the disease co-existed with bronchial dilatation. From these observations it follows that fœtor of the sputa does not, as has been supposed, necessarily imply their origin from a cavity in the substance of the lungs, or within the sac of the pleura. In chronic bronchitis, the mucus sometimes assumes a solid consistence, like the fibrinous coagulum within the cavities of the heart, and being moulded in the cavities of the bronchiæ, may obstruct the entrance of the air, occasioning more or less dyspnoea, according to the size of the affected passage. M. Andral records two cases of this nature, where the patients appear to have been destroyed by asphyxia. In other cases, chiefly of acute attacks supervening on the chronic form, suffocation appears to be produced merely by a sudden accumulation of mucus or pus in the bronchial passages. A certain class of bronchial affections is principally marked by the immense quantity of fluid, expectorated; the symptoms of fever or inflammation are, perhaps, entirely wanting; and the essential part of the disease appears to consist in the copious secretion of fluid from the bronchial membrane. The system becomes exhausted, not from hectic fever, but from the excessive and continued discharge, and even fatal results may ultimately ensue. Increased secretion may take place at undetermined periods, and give rise to that species of asthma, called humoral, or pituitous. In such cases M. Andral conceives the discharge to depend on



some cause distinct from inflammation. In adverting to those asthmatic cases where dissection discovers no change in the organs, either of respiration or circulation, capable of accounting for the symptoms, and which have been referred to some unknown affection of the pulmonary nervous system, M. Andral differs from those pathologists who deny the existence of a purely nervous asthma, although he admits such cases to be infinitely more rare than formerly supposed, and to have diminished in proportion to the light diffused by the researches of modern pathology.

II. *Pleuro-pneumonia*.—The next division of the volume treats of inflammation of the parenchymatous structure, ordinarily called pneumonia, or peripneumony, but for which M. Andral proposes the term "*Pleuro-pneumonie*," because he conceives that in every case of inflammation of the substance of the lung, the pleura is more or less affected; reserving the term *pleurisy*, for those cases of frequent occurrence where inflammation is confined to the latter membrane alone. The different forms of this disease, both in respect of its organic changes and its symptoms, are illustrated by a detail of sixty-three instructive cases, treated in the wards of La Charité. Our limits permit us only to notice some of the most interesting results he has deduced from the observations of these and other cases. And first, as to the anatomical characters presented by inflamed lung; instead of the three varieties recognized by M. Laennec under the names of *simple engorgement*, *red hepatization*, and *pale hepatization*, M. Andral conceives that the alteration which the pulmonary texture undergoes, in consequence of inflammation, appears under five distinct forms, three of which are common to acute and chronic, and two peculiar to chronic inflammation. The three common are—1st, simple serous engorgement of the parenchymatous structure; 2d, softening with increased redness and density; 3d, softening of the lung, which is not red, but of a peculiar grey colour, and is either infiltrated with pus, or incloses a circumscribed abscess. In the two varieties peculiar to chronic inflammation, the lung is not softened but indurated and dry, and in this state also it presents sometimes a red, sometimes a grey colour, and is accordingly said to be in a state of red or grey induration. In the first and most feeble degree of inflammation, constituting simple engorgement, the lung examined after death still crepitates, though less distinctly than in its healthy condition; in compressing a portion of lung thus affected, a sensation is communicated to the hand, that more liquid than air is contained in the air-cells. Sometimes the crepitation is scarcely perceptible, and we feel as if compressing a *fatal* lung. The colour of the engorged portion of lung

is changed, its reddish brown hue contrasts with the pale rose or grey colour of the adjoining healthy structure. When cut into, a reddish frothy serum escapes in large quantity. In this state, which is the result of the very slightest degree of inflammation, the natural tenacity of the lung is scarcely diminished; it may be compressed or pulled with considerable force without giving way. But when the inflammation has been more considerable, the affected parenchyma loses its consistence, becomes friable; and breaks when squeezed between the fingers. It then bears some resemblance to the structure of the spleen. This is an intermediate stage between simple pulmonary engorgement, and that red softened state which constitutes the second stage or degree of inflamed lung. To distinguish the serous engorgement produced by inflammation, from that which so frequently precedes death, in consequence of the accumulation of blood in the lungs, or from that which takes place even after death, we must attend less to the colour or degree of crepitation, than to the friability of the affected portion of lung. This latter quality, even in the slightest degree, invariably indicates the existence of inflammatory action. In the *second degree* of inflammation, (*ramollissement rouge*) the affected portion of lung is of a uniform red colour, and resembles in appearance a liver gorged with blood. It is void of crepitation, impermeable to the air, and no longer swims in water. When cut into, it discharges a reddish liquid, no longer frothy, and less abundant than in the preceding state. It is now extremely friable, and when slightly pressed between the fingers is readily reduced to a red pulp. When examined with a glass, it appears to consist of a crowd of minute reddish granulations pressed against each other, and when torn, these granulations are often visible to the naked eye. This is the *hepatization* of authors.

In a more advanced state the pulmonary structure is still dense, friable, and impermeable to the air, but has exchanged its red for a characteristic grey colour. When examined with the glass, the same granulations are seen as before, but instead of red they are grey or whitish. When the lung, in this condition, is cut into, a greyish liquid either oozes spontaneously, or, by compression, may be made to appear in the form of drops, coming from numerous points on the cut surface. This liquid is pus, and is inodorous. M. Andral, in common with the pathologists of the modern French school, considers the formation of an abscess in the parenchymatous structure of the lungs as an extremely rare occurrence. The reputed pulmonary abscesses which abound in the works of former writers were either tubercular excavations, dilated bronchiæ, or collections of pus cir-

circumscribed by adhesions between the pulmonary lobes, or between the pleura of the lungs and that of the ribs. M. Laennec has met with only six cases of genuine abscess, which were mostly small, the largest admitting the united ends of three fingers: M. Andral has seen only one. When the lung is in the above state of softening and purulent infiltration, its texture is so friable that the slightest pressure with the finger is sufficient to rupture it, so as to form a small cavity, which is immediately filled with pus, and is apt to be mistaken for an abscess of recent formation. Chronic inflammation of the pulmonary parenchyma is a very rare disease, and therefore the *induration* to which it exclusively gives rise, either in its red or pale variety, is seldom met with. But though chronic pneumonia in a pure or idiopathic form is rare, it frequently is observed as a secondary affection, concomitant or consequent on another disease. This is seen in melanosis, and in the common tubercle. In this latter case, particularly the pulmonary tissue immediately inclosing the tubercle is observed to undergo the successive states of inflammation already described, and finally to become dense, hard, and grey. That inflammation should produce, first softening, and afterwards induration of the pulmonary parenchyma, is in perfect analogy with its effects in numerous other organs and parts of the body. Thus, the cellular tissue, in a state of acute inflammation, becomes soft and friable; but if the inflammation instead of terminating in resolution, passes into a chronic state, it not only loses its morbid softness, but becomes harder than natural. We sometimes find the three stages of acute inflammation co-existing in the same lung, one part presenting simple engorgement, another red softening, and a third grey softening. This may arise from the inflammation not having proceeded with equal rapidity in these different parts, or from its having attacked them in succession. The inflammation may advance to the last stage in a very short period. Thus M. Andral has found a lung in the state of purulent infiltration on the fifth day of the disease. We shall not stop to examine the accuracy of M. Andral's doctrine respecting the *tissue* primarily affected in inflammation of the pulmonary parenchyma. The inflammation he conceives to be seated, not in the inter-vesicular cellular membrane, but in the internal surface of the air-cells themselves, and he explains hepatization, by supposing the formation of granulations on these surfaces. We think there are strong objections to the accuracy of these views, and it is but fair to state that M. Andral admits them to be mere hypotheses. He also conceives the termination of pneumonia in gangrene,

to be still more rare than in abscesses, and has recorded two instances of this occurrence.

Pneumonia may attack both lungs simultaneously, or it may be confined to one. The following statements are interesting, as showing the proportion of cases to which the right, or left lung alone, or both lungs are affected. Of 151 cases, recorded at La Charité, in 90, inflammation affected the right lung only; in 38, the left lung only; in 17, both lungs simultaneously; in the remaining 6, the seat was undetermined. Of 59 cases, recorded in the works of modern writers of acknowledged accuracy, in 31, the right; in 20, the left; and in 8, both lungs were affected; the sum of which gives, of 210 cases—121 to the right lung; 58 to the left; 25 double; and 6 undetermined. With regard to the inquiry what *part* of the lung is most frequently interested in pneumonia, the result of M. Andral's observations is hostile to a common opinion, that the superior lobe is almost never affected with inflammation; for of 88 cases—in 47, inflammation affected the inferior; in 30, the superior lobe; and in 11, the whole lung.

Frequently the inflammation is disseminated throughout the lung, affecting a number of insulated portions, varying from the size of a pea or nut, to that of an orange; and in the same lung these different portions may present all the different stages of inflammation. Pneumonia appears to be uniformly complicated with more or less inflammation of the lining bronchial membrane; at least after death it always appears injected with blood. The redness occupies, in an equal degree, the larger and smaller ramifications. It is frequently, though not always, limited to the bronchiæ of the inflamed lobe.

The characteristic symptoms of pneumonia, M. Andral enumerates as follows: pain more or less marked in the lateral part of the chest, dyspnoea, cough, with bloody and viscid sputa, dullness of sound emitted on percussion of the thorax, modification of the respiratory murmur, and fever. We shall select a few of the most interesting observations he has made on each of these symptoms, in their order:—

**1st. Pain.** M. Andral conceives that the acute pain checking inspiration, which is a frequent, though not a constant symptom of pneumonia, is wholly referable to the concomitant inflammation of the *pleura*. In support of this opinion, which (we believe) is at direct variance with that of M. Laennec, he states, that in every case of pneumonia attended with marked pain, where the disease proved fatal, he found distinct signs of inflammation of the pleura; and that on the other hand, the absence of pain always coincided with a sound state of

the pleura. He says that in pure pneumonia, uncomplicated with pleuritis, the patient experiences a sense of uneasiness and oppression in the chest, of deep-seated weight and unpleasant heat; but never *real pain*.

2d. *Dyspnœa*. The degree of dyspnœa in pneumonia, although generally in proportion to the *extent* of lung inflamed, is by no means so uniformly so as to afford us a certain criterion, or even decidedly to modify our prognosis. Many individuals, from causes not clearly understood, suffer a greater degree of dyspnœa from inflammation of a small portion of lung, than others whose lungs are more extensively inflamed. Inflammation of the superior lobes appears, *cæteris paribus*, to cause greater dyspnœa than that of the inferior.

3d. With regard to the modifications of the *sound* of respiration in pneumonia, or in other words the means furnished by auscultation of distinguishing the progressive changes which occur in the parenchyma, the observations of M. Andral amply confirm the well known doctrines of M. Laennec. He assures us, that in almost every case of pneumonia in its first stages, when we apply the stethoscope over the inflamed portion of lung, the natural murmur of the respiration is heard; mixed with that peculiar crackling noise called by Laennec, "*râle crepitant*," from its resemblance to the sound produced by decapitating salt on burning coals. This sound has sometimes a still stronger resemblance to that which we produce by rubbing a piece of parchment between the fingers. At its commencement, this crackling sound merely veils the natural murmur of respiration, but does not mask it altogether. As, however, the inflammation proceeds, it becomes more and more predominant, and finally completely usurps the place of the former. This peculiar *rattle* indicates, that the first degree of inflammation (that attended with serous engorgement) has taken place in the portion of lung in which it is heard, and that the lung is still permeable to the air. The more intense this crackling rattle, the more completely it supersedes the healthy respiratory murmur, we may infer that the lung is approaching the nearer to the second stage, that of hepatization. When death takes place during the continuance of this rattling sound, the lung is found merely gorged with fluid, but its structure is also generally more or less friable, according to the *duration* of the disease. In the second stage of the disease this rattle has much diminished, or entirely disappeared; and one of two things may now be observed; either in proportion as this unnatural sound has disappeared, it has been replaced by the healthy sound of respiration, or it has not; the former occurrence indicates a resolution of the disease, and a returning state of health; the latter denotes that hepatization or consolidation has taken place.

In this stage there is generally a complete absence of all respiratory murmur, in consequence of the lung being no longer penetrated by the air.

M. Laennec regards this complete absence of respiratory murmur as an invariable consequence of hepatization; but our author has observed a certain degree of sound sometimes to remain, in consequence of the air still being admitted into the larger bronchiæ; a sound which, however, he says, cannot confuse the diagnosis, as it is equally distinct from the rattle heard in the first stage, on the one hand, and the murmur of healthy respiration on the other. He says it is a kind of puffing noise, like that which would be produced by a person near the ear of the physician, blowing through a tube of brass. This is also accompanied by a peculiar modification of the voice as heard by the stethoscope, which has some analogy to pectoriloquism and cegophonism, and is precisely similar to the modification which the voice undergoes in bronchial dilatation.

With regard to the causes producing morbid sounds of the respiration, considered in general, our author states that they depend on the percussion of the column of air against fluids contained in the air passages, and that their different modifications depend on the state of the fluids, and the size and form of the passages in which they are contained. Thus, in the trachea we have the air striking against the mucus which accumulates there previous to death, producing the well known sound vulgarly called the "*dead rattle*." Thus, also, the air passing into tubercular excavations, and coming in contact with the pus they contain, produces that distinct gurgling noise familiar to all those who have used the stethoscope in phthisis. Again, when the fluid is effused in tubes of different dimensions, viz., the bronchiæ, the sound is considerably altered, forming the "*râle muqueuse*" of Laennec, indicative of certain forms of bronchitis. Again, when the fluid is effused into the air vesicles, it modifies the sound still farther, forming the "*râle crepitant*" of acute pneumonia, a certain degree of which invariably accompanies the more intense forms of bronchitis. These sounds pass and repass into each other by insensible degrees, according to the seat of the disease; the "*râle tracheal*" into the "*râle muqueuse*," and that again into the "*râle crepitant*."

When one lung is affected with hepatization, the healthy murmur of respiration, or to use the language of our author, the noise of the pulmonary expansion in the opposite lung is much increased in intensity, so as even to induce a suspicion that it also is in a state of disease. It would almost appear

that, as if to assist or supply the place of the disabled lung, it acted with increased vigour, and inhaled a larger quantity of air than in the natural state. Sometimes the quantity of mucus secreted in the bronchiæ is so great as to give rise to a mucous or bronchial rattle, so loud as completely to drown all other sounds. This is one case where auscultation does not enable us to form any judgment on the state of the pulmonary parenchyma\*. There are also certain modifications of inflammation of the parenchyma, where auscultation fails in affording us any sign; these are where inflammation occupies a circumscribed portion of the lung, remote from its surface, particularly at the base, at the root, or in the centre. It must also be readily seen when inflammation occupies a number of insulated portions of lung, that scarcely any satisfactory information can be derived from this mode of exploration.

4th, Percussion of the walls of the thorax affords another set of symptoms, which enable us to judge of the existence and degree of pneumonia. Before the introduction of mediate auscultation, the signs obtained by percussion were of the highest importance; by it alone the existence of pneumonia could frequently be detected when occurring in its latent form; that is, when the ordinary symptoms were wholly wanting, or so ambiguous as not to point out the real nature of the disease. Now, however, percussion, although too valuable to be neglected, can only be regarded as a subordinate aid to mediate auscultation. In numerous instances of pneumonic inflammation in the first degree, the thorax on *percussion* is no less sonorous than in health. Again, in pneumonia, the thorax seldom begins to lose its natural hollow sound till the third or fourth day of the disease; whereas *auscultation* denotes the existence and nature of the morbid action from its very commencement. The superior accuracy of auscultation is equally manifest towards the close of the disease, for after the opaque sound has disappeared, and percussion no longer indicates the continuance of farther morbid action, auscultation frequently announces that the resolution of the inflammation is not yet complete. *Percussion* cannot be practised when the walls of the thorax are painful, cedematous or tender from the application of a blister. The diagnosis drawn from percussion is rendered more or less fallacious by the fact, that the chest is by no means equally so-

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\* In cases also of enlarged heart, particularly where hypertrophy is combined with dilatation of the left ventricle, we have found it impossible to judge of the state of any part of the lungs by means of the stethoscope; the noise occasioned by the pulsation of the ventricle being so great as completely to drown every other sound within the chest. Reviewers.

norous in different individuals in health; thus, in many persons free from thoracic disease, it emits, when struck, a very obscure sound. In *auscultation*, on the contrary, we are not exposed to these sources of error.

There are cases already noticed, when both auscultation and percussion fail to afford us the requisite knowledge. This happens when the portion of lung inflamed is remote from the surface, particularly when situated in the centre, at the root, or base of the lung. M. Andral closes his observations on percussion by remarking, that in practising it, we should constantly bear in mind, that on the right side of the chest, the position of the liver, and on the left that of the spleen, occasion a want of resonance, which may be mistaken for the effect of disease *within* the chest. He might have added, that when either of these viscera is much enlarged, particularly the liver, it may encroach on the right cavity of the chest, and thrust the lung upward, out of its natural situation. The consequence of this displacement is the absence, not only of the hollow sound of the chest, but also of the respiratory murmur, sometimes to a very considerable extent, so as to render, not merely the diagnostic obtained from percussion, but also that obtained from auscultation, fallacious.

5th. Another class of symptoms, characterizing pneumonia, is founded on the cough and the characters of the sputa. The cough is short, seldom occurs in fits, but does not appear to bear any fixed relation, in point of violence or frequency, to the intensity of the disease. In the commencement, when the cough, dyspnoea, pain, and fever, are already sufficiently marked, the patient expectorates nothing, or at most, a little mucus collected in the throat, or bronchiæ, and mixed with saliva. In general, the expectoration commences from the second to the third day. The sputa then forms a jelly-like, tremulous mass, homogeneous, transparent, and uniformly reddish. They are not merely streaked with blood, as in catarrh, nor do they consist of pure blood, as in hæmoptysis, but of mucus, intimately and uniformly combined with it. According to the quantity of blood they contain, they are yellow, of a rusty iron colour, or decidedly red. They are, at the same time, tenacious and viscid, adhering to each other, so as to form a homogeneous mass; but in this stage of the disease, they are seldom so viscid as to adhere to the sides of the glass, but can readily be poured from one vessel into another. Sometimes they retain these characters during the whole course of the disease, in which case, the inflammation seldom exceeds the first degree. Sometimes again, they become more and more viscid, till they adhere firmly



to the sides of the glass, and cannot be detached by inverting it. This proves, that the inflammation is increasing in violence, and ought to excite apprehensions of its advance to the second stage; a suspicion which is generally confirmed by a simultaneous diminution of the natural resonance, and the disappearance of the respiratory murmur on the affected side of the chest. It may be laid down as a general rule, that the degree of the viscosity of the sputa increases in proportion to the intensity of the inflammation. When the inflammation diminishes, and tends to resolution, the quantity of blood contained in the sputa, as well as their viscosity, likewise gradually diminishes. At first, a little agitation is required to detach them from the sides of the glass, by and by they can be poured out, merely by inclining it to one side; gradually they resume the character they had in the commencement of the disease, and finally, are converted into the sputa of simple catarrh. It is a common observation, confirmed by the authority of Cullen, that the resolution of pneumonia is particularly favoured by the free and copious expectoration of a thick, white, yellowish, or greenish matter, but it must not be supposed, that this alteration of the sputa is a necessary preliminary to complete resolution, in as much as our author has often seen the disease terminate in the most favourable manner, although the sputa (after losing their viscosity and bloody tinge) remained watery, transparent, and colourless. For several additional interesting observations on the diagnostic varieties and treatment of pneumonia, which our limits oblige us to curtail, we must refer to M. Andral's volume, and close our analysis with a brief survey of the third part of his work, which treats of pleurisy.

III. M. Andral treats pleurisy as pneumonia, in two distinct ways. The first part of the chapter consists of a detail of cases, thirty-six in number, treated in La Charité, illustrating the disease in numerous points of view; each case being followed by appropriate observations. These cases are arranged so as to illustrate the principal varieties of pleurisy. The first group consists of cases unaccompanied with effusion of fluid, or dry pleurisies; the second, of those accompanied with effusion; the third, of partial pleurisies, or those limited to the diaphragm, to the interlobular surfaces, to the mediastinum, or to a defined portion of the costal or pulmonary pleura; the fourth consists of double pleurisies, or those affecting both sides of the chest at once, and the fifth group of pleurisies complicated with other diseases, viz., tubercles, pneumo-thorax, pericarditis, chronic tubercular peritonitis, acute peritonitis, &c. The second part of the chapter forms a complete general history of pleurisy. It

treats first of its anatomical characters. When the pleura has been the seat of slight recent inflammation, the affected portion appears red, but on close inspection, the redness is found to depend, not on the increased vascularity of the membrane itself, which is perfectly transparent, but on the injection of the subjacent cellular tissue. This condition may be observed when a foreign body is introduced, or a slightly stimulating fluid is injected into the chest of an animal, and it is examined shortly afterwards; or in the human body, when death takes place from any disease that is accompanied with a slight degree of pleurisy. In a more intense degree of inflammation, the membrane itself becomes the seat of increased vascularity. This presents a great variety of forms; sometimes the vessels are few in number, with large intervening spaces; sometimes they are numerous and closely crowded, anastomosing in a thousand ways, so as to form either simple red points, long continued streaks, broad patches, tortuous bands; or finally, and what is very rare, there is a uniform red tinge. Real thickening of the pleura from inflammation, is a very rare occurrence, those authors who have described it as common, having manifestly confounded the pleura with the false membranes adhering to it. Our author has never observed in the pleura, that state of softening and ulceration, common in the inflamed peritoneum, but he has sometimes seen the pulmonary pleura detached with much greater facility than natural, from the surface of the lungs, as if the fine cellular tissue, which unites it to the parenchymatous structure, had participated in the inflammation, and had, in consequence, become friable. A much greater variety exists in the secretions of the inflamed pleura, than in the appearance of the membrane itself; and what is remarkable, in numerous cases where secretions from inflammation are sufficiently conspicuous, the membrane itself retains the appearance of health. In quantity, the secreted matter varies from an ounce to several pints. In respect of quality, it is sometimes a colourless, or citron-coloured, clear serum, and in such cases, slight redness of the pleura, or a few membranous exudations adhering to it, are the only unequivocal signs of inflammatory action. Most commonly, however, flakes of lymph are either found floating in the liquid, (without, however, disturbing its transparency) or precipitated at the bottom, and rendering it slightly turbid when stirred up. In other cases, the liquid effused is decidedly turbid, and of a yellow, greenish, brown, or greyish colour; sometimes thick like mire. Lastly, and after passing through several intermediate gradations, it appears under the form of common pus. In more uncommon cases, we find a fluid equally

different from pus and serum, which is usually inclosed in cavities formed by adhesions, and resembles either half liquified animal jelly, or honey; or, still more closely, the matter contained in the melicerous tumour. *Blood* may also be effused by the inflamed pleura, either along with serum, in which case, it communicates to the latter fluid a red tinge, or in a pure state, and capable of coagulating spontaneously.

The observations of our author confirm the opinion now pretty generally received, that pure dropsy of the chest, or, in other words, effusion of serum, unaccompanied by traces of inflammation of the pleura, and not produced by obstruction of the circulation from organic disease, is a very rare affection indeed. M. Andral next treats of false membranes, discusses the theory of their formation, describes their varieties, and the diseases to which they are subject; the most remarkable of which is the formation of tubercles. These form, and increase in size and number with almost incredible rapidity. He then describes the state of the lung compressed by accumulated serum, gives a brief sketch of the causes of pleurisy, both predisposing and exciting, and next proceeds to examine, in detail, the different symptoms which announce its existence. On the symptoms of pleurisy, considered in general, we shall make one remark, which is strongly illustrated by the observations of our author. Although, in a majority of cases, pleurisy is extremely well marked, and distinctly characterized by its symptoms, yet in forming a diagnosis, we should not lean too much weight on any of these symptoms taken *individually*, for none of them, even the most characteristic, is constant or invariable. Thus M. Andral records cases where the pain of the side, the dyspnoea, the cough, the febrile reaction were, each in their turn, wanting. Although, however, diagnostic conclusions founded on any single symptom are of little value, yet the collective force of several or all, may furnish probability amounting nearly to certainty. But pleurisy may exist although the whole of the ordinary symptoms are simultaneously wanting. This volume records several cases of pleurisy, when the existence of the disease was revealed neither by pain, dyspnoea, cough, nor fever. In these cases, the inflammation is said to be latent, and we believe, such affections, whether acute or chronic, and both in the pleura and other membranes, to be more frequent than commonly supposed.

PAIN, which is one of the most characteristic symptoms of pleurisy, varies much in situation, intensity, and duration. Although the inflammation which it indicates, occupies a very extensive surface, the pain is very generally felt only in a single—

point, which point is most frequently on the same transverse line with the nipple, or a little lower. Sometimes, though more rarely, the pain is felt in other points, as in the axilla, under either clavicle, beneath the sternum or scapula. Again, the pain, instead of being confined to a single point, may shoot in a continued line along the whole extent of the thorax; when laterally, from the axilla to the inferior ribs, when anteriorly, from the clavicle to the base of the thorax. In other cases, chiefly those where the pleura of the diaphragm is affected, the pain is felt principally in the hypochondrium, shooting along the margin of the cartilages of the false ribs, and extending to the epigastrium, or downwards as far as the ileum, when it is liable to be mistaken for a symptom of inflammation within the abdomen. The pain, wherever seated, is augmented by percussion, pressure on the intercostal spaces, lying on the affected side, inspiration, and motion of the trunk. At the commencement of the pleuritic attack, the pain is sometimes undefined and wandering, when it is apt to be attributed to a rheumatic affection of the muscles of the chest. The frequent attacks of pain within the chest to which phthisical patients are liable, appear to arise from slight and partial inflammations of the pleura. In these attacks, the pain is most frequently felt beneath the clavicles, in the hollow of the axilla, or between the shoulders at the upper part of the dorsal region, which are precisely the situations where cellular adhesions are most frequently found after death. The *dyspnœa*, which marks the first stage of pleurisy before fluid is effused, is solely the result of the acute pain which prevents the free expansion of the chest. After effusion has occurred, the dyspnœa depends also on the mechanical compression of the lung, and hence ought to be in direct proportion to the quantity of fluid collected. This general rule, however, is subject to numerous exceptions. Although at variance with our *à priori* ideas, it has frequently happened, that one of the pleural cavities has contained fluid sufficient to occasion a sensible dilatation of that side of the chest, and yet the patients, when in bed, have respired with perfect freedom, nay, have been able to move about, to walk, or even run, without experiencing any marked affection of the breathing. Our author records several cases illustrative of this curious fact. One of these, in which the effusion was the result of a pleurisy of a few days' duration, proves that this absence of dyspnœa is not confined to those cases where the fluid has collected slowly.

When inflammation is confined to the costal or pulmonary pleura, the respiration is carried on principally by the contraction of the diaphragm, the intercostal muscles remaining com-

paratively quiescent ; and when, on the contrary, the portion of pleura investing the diaphragm, is the principal seat of the inflammation, that muscle remains quiescent, and the dilatation of the thorax is effected principally by the elevation of the ribs.

In so far as respects dyspnoea, our author ranges patients, labouring under pleurisy with effusion, into three classes. In the first, the dyspnoea is constant and extreme, from the commencement to the termination of the disease, which is uniformly fatal. In the second, the respiration is at first very much oppressed, but the dyspnoea soon diminishes, and finally disappears long before the effused fluid is absorbed. In the third, the respiration is scarcely affected during the whole course of the disease.

The *cough* in pleurisy presents no very marked or peculiar characters ; it is generally short, small, and stifled, and does not occur in paroxysms. In many severe cases, accompanied with effusion, it is altogether absent, and cannot therefore be regarded as a pathognomonic symptom of pleurisy. It is either dry, or accompanied with the expectoration of merely catarrhal sputa, generally in small quantity. The only exception is, when a collection of purulent fluid having taken place within the cavity of the pleura, has formed a communication by ulceration, with one of the bronchiæ, and is evacuated by coughing. This occurrence can take place only in chronic pleurisy, and even there is very uncommon.

*Decubitus* on the affected side, has been regarded as one of the pathognomonic symptoms of pleurisy, accompanied with effusion, but the observations of our author sufficiently expose the fallacy of this idea. In a large proportion of pleurisies, whether accompanied with effusion or not, he has found decubitus to take place on the back. Several of his patients, indeed, manifested a very sensible inclination to lie a little towards the affected side, (decubitus diagonal) but a very small number only has reclined wholly on that side. This, he says, occurs only when there is no pain, or when the effusion is very considerable. In other cases, decubitus takes place on either side, or on the back, indifferently. When the diaphragmatic portion of the pleura is inflamed, the horizontal posture cannot generally be supported, the patient assumes the sitting posture, he even bends the trunk forwards, as if relieved by this position.

From the time that even a small collection of fluid has begun to form in the chest, its presence is denoted by a diminution of the natural sonorous property of the side where it exists. In proportion as the fluid accumulates, the sound emitted by the chest, when struck, becomes more and more dull. At first, this "mat" sound can be perceived only in the lower part of the

affected side, gradually it extends upwards, and at last pervades the whole. When the pleurisy is double, and the effusion takes place on both sides at once, the want of resonance, being equal on both sides, may, if not very marked, escape notice, or may be taken for the natural state of the chest, in virtue of the fact that many healthy chests emit a much duller sound on percussion than others apparently in the same condition. When the collection of fluid is circumscribed, the "mat" sound is heard only in a small portion of the thoracic parietes, and in certain forms of circumscribed collections of fluid, *percussion reveals no diminution whatever of resonance*; this happens when the fluid collects in circumscribed cavities between the pulmonary lobes, on the surface of the diaphragm, or that of the mediastinum, or in any situation remote from the surface of the thorax.

*Auscultation* affords more certain and precise information than percussion, respecting the condition of the chest in pleurisy. In the commencement of the disease, before effusion has taken place, and when the sound which the chest emits on percussion is natural, the murmur of respiration, as heard by the stethoscope, is sensibly fainter on the inflamed than on the healthy side, especially if there be considerable catch on inspiration; and at the same time, the ribs of the inflamed side are observed to rise and fall less than natural. M. Andral attributes this diminution of the noise of respiration to the violence of the pain, which instinctively induces the patient to suppress the motion of the ribs of the inflamed side. Hence, a smaller quantity of air penetrates into this lung at each inspiration, and of course, the sound occasioned by its entrance is rendered fainter. This, he says, is so true, that if the pain be not violent, both sides of the thorax dilate equally, and the murmur of respiration is equally loud in both lungs. As soon as effusion has commenced, there is a new cause for the diminished expansion of the lung during inspiration, and the murmur is now *constantly* fainter than on the healthy side. It becomes more and more feeble as the fluid accumulates, whilst in the opposite lung, the noise of respiration becomes louder than natural. It must, however, be observed, that although much diminished in intensity, the noise of respiration does not wholly disappear on the affected side, even though the collection of fluid be very considerable. Our author has observed it distinctly, where the pleural cavity contained about a pint of liquid. At last, however, when the fluid has accumulated in still greater quantity, the murmur of respiration disappears entirely, either throughout the whole of the affected side of the chest, or at its inferior or posterior part only. The conclusions we draw from the continu-

ance or cessation of the murmur of respiration, in the different parts of the affected side of the chest, are essentially modified by the different situations which the lung, compressed by liquid, may occupy. Thus, in the majority of cases, the whole lung is pressed towards the vertebral column, and the sound of respiration disappears progressively from below upwards, and in an equal degree behind and before. In other cases, the lung, instead of being carried towards the vertebral column, is pushed directly from before backwards, and lies applied flatly against the ribs. In this case the noise of respiration becomes extinct in the anterior part of the chest, while it continues audible in the posterior. Again, the inferior lobe may be retained in its place by old adhesions. The fluid can then accumulate only in the space occupied by the superior lobe, and the noise of respiration consequently, disappears from the upper part of the chest only. Such anomalous occurrences may cause the nature of the disease to be mistaken. Sometimes, instead of a complete cessation of all respiratory murmur, the natural sound of respiration is replaced by that peculiar modification of sound which we have already described in speaking of hepatization, called by M. Andral, "respiration bronchique," because he conceives it to be produced by the air penetrating into the larger bronchia only. When there is an accumulation of mucus in the bronchia, the interposition of a liquid between the lung and the ribs does not readily destroy the different rattling sounds which result from the collision of the air and mucus; a fact not without its use, as the existence of such rattling sounds might lead to the belief that the lung was still in contact with the ribs, and consequently to a mistake respecting the nature of the disease.

The observations of M. Andral on the modifications which the voice, as heard through the stethoscope, undergoes when fluid is collected within the cavity of the pleura, confirm, generally speaking, the doctrines of M. Laennec, though differing in some particulars; that peculiar resonance of the voice, as heard through the stethoscope, called by M. Laennec "egophonie," from its resemblance to the shrill tremulous cry of the goat, and considered by him as a characteristic sign of fluid in the cavity of the pleura, M. Andral has observed in a considerable number of cases. Egophony, however, he considers as a generic term, including many varieties of vocal resonance, some of which are considerably unlike the original egophony of M. Laennec; whilst in other cases of fluid collected within the pleural cavity, he has not been able to distinguish any phenomenon bearing the most distant resemblance to egophony; the voice differing from that heard on the healthy side, merely by

an increase in the *intensity* of its resonance. It will readily be conceived, that the above modification of voice, liable as it is to so much uncertainty and to many varieties, may readily lead into error, and that what is merely a natural variety of the voice, may be mistaken for the effect of disease. This source of error may, to a certain extent, be avoided by previously ascertaining the condition of the voice on the healthy side, and comparing it with the modifications observed when the stethoscope is applied to that supposed to contain the fluid. When the fluid collected in one of the pleural cavities is small in quantity, the voice undergoes no particular change; when more considerable, the different varieties of egophony are distinguished; but when the quantity of fluid accumulated is so great, as by its compression to prevent the entrance of the air, even into the larger bronchiæ, there can, of course, be no vocal resonance whatever.

M. Andral considers the changes which the voice undergoes, when fluid is collected in the cavity of the pleura, to depend on two causes: first, the transmission of the sound, through a liquid medium. This seems to be the principal modifying cause when only a small quantity of liquid is collected, and the lung but slightly compressed; but when the liquid accumulates to a much greater extent, and compresses the lung so much as to prevent the air from penetrating farther than the larger bronchiæ, its vibration in these appears to be the principal cause which produces the modification of voice called egophony. As the mechanical condition of the bronchiæ of a lung compressed by fluid, is very similar to that of the bronchiæ of a lung in a state of hepatization, it might be naturally anticipated that a similar modification of voice would take place in both cases. Accordingly, in hepatization, M. Andral has observed a peculiar modification of the voice which does frequently approach so closely to that observed when fluid is collected within the chest, that (contrary to the opinion of M. Laennec) he does not consider egophony as a sign by which we can distinguish effusion from hepatization. To distinguish these diseases, we must have recourse to other diagnostic signs. If, in conjunction with *slight* obtuseness of sound on percussion and egophony, we hear the healthy murmur of respiration, unmixed with the peculiar crackling rattle of pneumonia, but merely somewhat feebler than on the opposite side, we may conclude with certainty that effusion, not hepatization, is going forward; and *vice versa*, if along with dulness of sound on percussion and egophony, there be not merely a diminution of the respiratory murmur, but some degree of the crackling rattle, then we may infer that the case is not pleurisy, but pneumonia. If, on the con-



trary, in conjunction with great obtuseness of sound on percussion, and the egophonic modification of voice, there be either a complete absence of the respiratory murmur, or that substitute for it, already described under the appellation, *respiration bronchique*, then *auscultation*, does not enable us to decide whether the disease be hepatized lung, or pleuritic effusion; and we are obliged to have recourse, for the means of diagnosis, to the history of the disease and to the other symptoms, one of the most characteristic of which is the red colour of the sputa, peculiar to pneumonia. If there should be dilatation of the affected side of the chest, which is sometimes the case, there can be no difficulty in distinguishing the two diseases.

ART. IX. *A Short Treatise on Operative Surgery, describing the principal Operations as they are practised in England and France, designed for the Use of Students in Operating on the Dead Body.* By CHARLES AVERILL, Surgeon, Cheltenham, Fellow of the Royal College of Surgeons, and Member of the Medico-Chirurgical Society, London. London, 8vo.

We have made favourable mention of this little work in a former Number of our Journal, in which copious extracts were given. We hope a few observations here, on the important subject of Operative Surgery generally, and on some points particularly, in the improved edition of this Treatise, will not be deemed superfluous by our readers.

A surgical anatomist ought not only to be familiar with the different tissues, entering into the structure of parts which may be the subject of operations, with the relative situations of these tissues, and their modifications in particular cases, but he should also be familiar with the painful, and not unfrequently perplexing, circumstances attending the performance of operations on the living body. We may compare him to the mariner intrusted with the safety of a ship, in the midst of a sea crowded with shoals and quicksands; who not only must be acquainted with the principles of navigation, but ought also to witness the skillful efforts of the veteran pilot, when storms rage and perdition threatens. Besides, to enable him completely to discharge his duty, he must render himself familiar with the bearings of the various beacons, and the soundings of his course, without which

he can never enjoy that feeling of security, so necessary to ensure success.

When the physician has unsuccessfully exhausted all the resources of his science, for calming irritation, and restoring the healthy functions of a part diseased, to such an extent as to destroy the comfort, or endanger the life of an individual, recourse must be had to the knife. In such a case, necessity and duty compel us to embrace this last effort of the medical sciences, as the only alternative remaining, by which we may rid our patient of a dangerous disease; and in adopting it, we ought to consider the benefit likely to accrue to our patient, rather than the temporary pain we must necessarily inflict upon him. It cannot, however, be denied, that the sufferings of a patient, under the hands of an expert and an inexperienced operator, will be, *ceteris paribus*, very different; and such a reflection points out to the surgeon, the necessity of studying with care the best means of accomplishing his object; and makes him shrink from the idea of acquiring that dexterity resulting from practice alone, by operating only on the living body, which, in a great measure, may be acquired by operating on the dead.

The object of Mr. Averill's little work is to give a concise account of the best method of operating on the dead body, to enable the student to acquire that dexterity which we consider so necessary to the practical surgeon.

Our author first gives instructions for holding the knife, and then describes some of the most simple operations. We think his observations on these points ought to be carefully studied, and ever kept in view by the surgeon in performing an operation on the living body. Such instructions appear to us the more necessary, because, in our opinion, they have hitherto been too much neglected, and we are persuaded, from our own observation, that due attention to these, for a short period, will enable the operator to handle his instruments with ease and elegance, and give him a facility in executing, which, if neglected, he could never acquire. The following remarks of a late distinguished Professor, we consider applicable to the principle we wish to inculcate, and extremely judicious. "When that which is simple is fully attained, that which is complex will be more easily understood, and better performed; and it will often be found, that the final success of that which is great, very much depends on the accurate execution of that which is little."

We shall now consider some particular operations given in the volume before us, which we select, either on account of their practical importance, or the peculiar manner in which they have been described.

Mr. Averill's rules for taking up the radial, ulnar, brachial, and axillary arteries, in different parts of their courses, do not present any thing that appears to us particularly worthy of notice, and we shall, therefore, next proceed to his description of the operation for passing a ligature round the subclavian artery, under the clavicle. When this artery is to be secured, the large vein which is situated immediately before it, renders the operation particularly difficult; and, in our opinion, the comparative ease with which it may be taken up above the clavicle, in almost all cases requiring the application of a ligature, should lead us to prefer taking it up in the latter situation. The application of a ligature to the artery below the clavicle, should we succeed in applying it, cannot possess any advantage over the method which we recommend; on the contrary, in cases of axillary aneurism, it is the duty of the surgeon to apply the ligature as remotely as possible from the seat of the disease, as, even in the most favourable cases, the artery is always found more or less diseased in the vicinity of the aneurismal tumour. If, however, in any case, we were called upon to secure the artery under the clavicle, we would not recommend the first "incision to be carried in the course of the junction of the sternal, with the clavicular portion of the pectoral muscle," as this increases very much the difficulty, by carrying us too low down; to avoid this, we should propose the first incision to be commenced about half an inch from the sternal extremity of the clavicle, and to be carried in the direction of the coronoid process of the scapula. By this incision, a few fibres of the pectoral muscles will be divided, which will be of no consequence, when compared with the much greater ease with which we thus reach the artery.

In describing the operation of taking up the subclavian artery above the clavicle, Mr. Averill recommends "the first incision to be commenced half an inch from the sternal extremity of the clavicle, or immediately on the outer edge of the origin of the sterno-mastoid muscle, and to be extended outwards for about three inches. This artery is found on the external side of the eminence formed by the juncture of the cartilaginous with the bony portion of the first rib." Hodson's method of operating is also given. From frequent and careful performance of this operation on the dead body, we should propose the following as the better method for proceeding. The patient is to be placed on a firm table, with his shoulders raised a little, whilst the head is allowed to hang backwards, so as to put the sterno-mastoid muscle on the stretch. The first incision is to be commenced at the point where the sterno-mastoid is attached to the clavicle, and is to be carried upwards along its exter—

nal border for two inches; a second is to commence from the same point as the first, and is to extend along the superior margin of the clavicle for the same length. The arm is now to be drawn downwards, and the triangular flap, formed by the two first incisions, is to be dissected up. The external jugular vein, if possible, ought to be drawn to a side; if this cannot be done, it is to be tied, divided, and its extremities raised. We ought now carefully to divide the cellular substance in the course of the first incision, until we reach the scalenus anticus, behind which the artery will be found passing with the nerve above, and the vein below and anterior to it.

In all cases when a ligature is to be passed around deep-seated vessels, the surgeon ought to have some of the spatulas, recommended by Mr. Colles, as they will be found very useful in separating deep-seated parts.

We consider the following notes for securing the lingual artery, as worthy of being transcribed. They were taken by our author's friend, Mr. Wise, while they were practising together at Paris, the operations described in this work.

"The patient is to be placed on a chair, with his head reclining backwards on an assistant, who should keep the lower jaw fixed. An incision, commenced over the body of the hyoid bone, is to be carried outwards, and a little upwards, or towards the mastoid process of the temporal bone, for two inches. By this incision, the skin and platysma myoides being cut through, the cervical fascia is brought into view, over, or sometimes under which, a vein passes, which is to be drawn aside; if this cannot be done, it is to be tied, divided, and dissected up. The fascia being divided to the same extent as the external wound, the posterior portion of the digastric muscle should be drawn downwards and outwards, when the lingual artery can easily be felt resting on the genio-glossus muscle with the hyo-glossus over it, on which the lingual nerve passes. After dividing a few fibres of the hyo-glossus, a ligature may be passed round the artery, as it runs along the superior part of the horn of the hyoid bone.

"In performing this operation, care must be taken to avoid cutting the lingual nerve, and as the superior hyoid artery passes near it, the operator should guard against taking up that vessel for the lingual."

After giving rules for taking up the arteria carotidea and innominata, we have a description of the operations for securing the arteries of the inferior extremities: after which, excellent remarks are made upon extirpating the mamma, which we shall now give, as we have seen very respectable surgeons perform

the operation very indifferently, from not attending to a few simple rules.

"The patient being seated on a chair, the operator places himself before him, when an assistant puts the pectoral muscles on the stretch, by raising the arm from the side. The operator then, with the fingers of his left hand placed parallel to the course of his first incision, draws the integuments tense, and makes the cut on the outer and under side of the tumour, of a semilunar form, extending obliquely from above, downwards. The corresponding incision is then to be made, beginning and terminating at the same points as the former, but passing on the other side of the tumour, inclosing as much of the integuments as may be deemed sufficient, which the operator puts on the stretch, by pressing it from him with his left thumb. The dissection commenced at the upper and outer part, is to be continued obliquely from above downwards, in the direction of the fibres of the pectoral muscle, till the tumour is separated."

The limits we can allow for observations on this work, will not admit our making any remarks on the following operations which are generally well described, and which we shall enumerate in the order they are treated:—bronchotomy; œsophagotomy; hare-lip; operation for extirpating cancer of the lip; for the removal of a part of the inferior maxillary bone; for wry neck; for paracentesis abdominis, and thoracis; for puncturing the pericardium; and for puncturing the bladder by the rectum, above the pubes, and by the perineum. These operations are followed by a description of four methods of performing the lateral operation of lithotomy. Descriptions of such modifications in the performance of this operation, might be increased to a great number, from the almost innumerable variety of instruments recommended. Surgeons seem to consider it necessary, for rising to eminence, to invent some new or improve some old instrument for performing lithotomy. It is on this account, that since the employment of the complicated apparatus, major and minor, we have had recommended at different times, a lithotome cachée, beaked pointed knives, gorgets, and grooved staffs, tortured into almost every form, with, in general, a vaunting account of some advantage, the particular form is said exclusively to possess. Such assertions, however, regarding the superior excellence of one instrument over another, spring rather from the vanity of the inventor, than from his conviction of its real superiority. One should, at least, expect from the variety of these instruments, that the operation is a most formidable one, and from the strong recommendations given to them, should be led to conclude, that the success of the operation depended much upon the perfection of the instruments employed.

Examination, however, proves to the unprejudiced observer, that with a competent knowledge of anatomy, and some practice on the dead body, the operation is easy; and that a person so qualified, requires no complicated instrument. The scalpel ought certainly to be preferred, as the surgeon is daily accustomed to employ it; and as it possesses all the advantages, in properly qualified hands, which other forms of instruments can possess, with none of their disadvantages. Formerly, surgeons were so ignorant of relative anatomy, that we ought not to be astonished at the general use of the lithotome cachée, or the clumsy gorget; as their employment does not require that the operator should be intimately acquainted with the structure of the parts engaged in the operation. But ignorance of anatomical structure, on the part of a lithotomist, appears to us a crime of so great a magnitude, that we cannot reprobate it too highly, and we forbear making any remarks upon one who could endanger the life of a fellow creature intrusted to his care.

The common scalpel, then, with a blade a little longer than that employed for ordinary purposes; a grooved staff, more or less curved, and forceps, are all the instruments, in our opinion required, in performing the lateral operation for the stone. We should be glad to see all the other instruments discarded from the *armamentaria chirurgica*, unless it can be satisfactorily proved that they possess some advantages, which have not hitherto been discovered by the candid part of experienced surgeons. It would be for the honour of our profession, that surgeons were less desirous of improving instruments from selfish motives, and less disposed to take to themselves the credit of inventors, in every trivial innovation they may think fit to recommend. Let us rather endeavour to improve the head, and exercise the hand, than wrangle about trifling and useless modifications in the form of the instruments we employ!

The student ought not to attend exclusively to the lateral operation, as in some cases the high operation, or the method of operating by the rectum, may be employed with advantage. Such cases are, however, comparatively rare.

The shortness of the urethra in the female, and the comparative size to which it can be dilated, are the reasons why we so seldom require to perform the operation of lithotomy on them. When obliged to operate, we should beg leave to direct the attention of surgeons to the following method proposed by Lisfranc, for performing the operation without dividing the urethra, which is so frequently followed by incontinence of urine:—

“The patient being placed as in the lateral operation, two assistants separate the labia; whilst the operator passes into the bladder

a male catheter, or a sound, turns its convexity upwards, and gives it to an assistant to hold; who, by bearing it downwards, depresses the urethra and vagina. The operator then, with a straight bladed bistoury, begins an incision exactly opposite, and on the right side of the meatus urinarius, and about a quarter of an inch from the descending ramus of the pubes; he continues it upwards over the urethra, and finishes it at a point diametrically opposite to that at which he commenced: thus leaving a cut of a semi-circular form, with its convexity upwards.

"He now explores, with his left index finger, the extent of this incision; and feeling forwards, cuts cautiously on, in the same manner, until he has opened the bladder; when, the left index finger being used as a director for the forceps, the stone may be extracted as in the other operations."

As our author's remarks on castration and amputation of the penis, offer nothing particular, we shall pass to another division of the little volume before us, which treats of amputations. After some general remarks, Mr. Averill considers amputation of the phalanges.

We think it very questionable, if in any case, we ought to perform the first operation described, or amputation at the joint, between the first and second phalanx. We are of this opinion, from the deformity left after this operation being much greater than when the finger is wholly removed, especially by the method afterwards to be described, and from there being no muscle attached to the extremity, the stump is consequently deprived of motion.

Nothing is more simple than removing a finger, by one accustomed to perform the operation on the dead body, nothing apparently more difficult when performed by one without previous practice. It is by no means uncommon to see the inexperienced operator, after tearing and twisting the joint, completely foiled in his attempt to enter it, in consequence of having neglected to perform the operation on the dead subject. By attending to the two following circumstances, the operation will always be completed with the greatest facility: first, bending the finger a little on the first joint; and secondly, commencing the incision sufficiently high up, so as to divide the external tendons. We have had often an opportunity of witnessing that scientific surgeon, and expert operator, Mr. Lawrence, perform the operation, and consider his method as being particularly worthy of imitation, as we thereby much diminish the deformity produced by the removal of a finger. The peculiarity of his method consists in removing the extremity of the metacarpal bone, by dividing it obliquely with the pincers, employed by Mr. Liston, of Edinburgh, which is done

with the greatest facility. This method is particularly applicable when we are obliged to remove the index or little fingers.

Mr. Averill terminates his description of the amputation of the fingers, by the following remark :—

“ If the finger be amputated for accident, no ligature will be required ; but if for a disease in which there has been long continued inflammation, the arteries should be secured, as they are generally enlarged.”

We consider this of great practical importance, as we have seen some cases of this kind, where the hæmorrhage continued for a considerable time ; in one of these examples it continued for ten days, although all the means were employed to check it that a judicious surgeon could devise.

Mr. Averill describes a complicated operation, recommended by M. Lisfranc, for removing the metacarpal bone of the little finger. We were disappointed to find that our author does not make any remarks upon its propriety in the living body ; nor does he even state the fact, that by this operation all the other joints between the carpal and metacarpal bones are laid open, which ought to be avoided if possible. It is certainly an axiom in surgery, not to open joints if we can avoid doing so, and in the present case, we can almost invariably avoid the disagreeable necessity of opening so many, by dividing the metacarpal bone near its carpal extremity by means of Liston's pincers ; thus rendering M. Lisfranc's operation entirely unnecessary.

Amputation at the wrist joint is the next operation described by our author. M. Lisfranc states in his “ *Lçons*,” that to be within the bounds of truth, he will say he has only performed this operation two hundred times. We shall leave our readers to decide upon the veracity of such an assertion ; but in our opinion this operation ought never to be performed.

We have already trespassed too long upon the patience of our readers ; and shall be, therefore, very brief in our remarks on the remaining part of this work, which contains a description of the different modes in which amputation of the fore arm, at its lower third, at its middle, and at the elbow joint ; at the lower third of the humerus, and at the shoulder joint, are performed, but they do not require particular comment. As a general rule, however, in amputating, we prefer the circular to the flap operations ; but in particular cases, when a large portion of muscle has been removed, and perhaps, when we have to amputate the fore leg about its middle, the flap may be employed with advantage.

In following our author in his descriptions, we shall now give his remarks upon the removal of all the toes by one operation,



which in some cases of accident or gangrene requires to be performed.

"Supposing it is the left extremity to be operated on, and the foot steadily fixed by an assistant, the operator feels for the head of the first phalanx of the great toe, which joins the metacarpal bone, and on it places his left thumb; on the same extremity of the little toe, he places his left index finger, the toes resting on the palm of the hand. He then, with a narrow bladed cutting, or amputating knife, makes a semicircular incision from the point marked by his thumb, to that before his index finger, cutting through the integuments and tendons. By a second cut in the same direction, he opens the joints, and bending the toes downwards, cuts through the ligaments surrounding the articulation. Keeping the toes bent, he passes the knife horizontally, a little beneath the under surface of the bones, so as to get clear of the articulations. Then, raising the toes, and pressing them upwards, he lowers the handle of his knife, and with the point completes the flap from their under surface, by cutting to the commissure of each separately, beginning at the great toe; the assistant raising them in regular order as the knife cuts through the integuments below. In this way, a flap is formed of sufficient size to cover the heads of the metatarsal bones, and unites with the divided integuments above. The arteries which require ligatures being tied, the cut edges are to be kept in contact by adhesive plaster.

"In performing the operation on the right foot, the first incision is made from the little toe upwards, and finished in the same manner, the operator cutting from left to right."

The two operations for performing the partial amputations of the foot, require considerable practice on the dead, before they can be properly performed on the living body. These operations consist in removing part of the foot, at the junction of the tarsal and metatarsal bones, or at the junction of the astragalus and os calcis, with the scaphoid and cuboid bones; by which means we retain a serviceable ankle joint.

We consider it quite unnecessary to say any thing here on the amputations of the inferior extremities, in the performance of which the same principles are to be attended to as in performing amputations on the superior. We cannot, however, refrain from mentioning that surgeons are guided too much by the nature of the disease, and attend too little to the circumstances of the patient, in deciding on the part where amputation is to be performed. In poor patients, we ought in all cases to remove the fore-leg four inches from the head of the tibia; but in the rich, we ought to save as much of the tibia as possible, to which a false foot and ankle joint may be fixed.

We shall not stop to consider Park's operation of removing the knee joint, as we entirely agree with our author, when he

says, "I should scarcely believe it would ever again be attempted."

Before terminating this article, we shall now, as reviewers, candidly deliver our opinion on the volume before us. As a Treatise on Operative Surgery, we consider it as a creditable production, and as one calculated to advance the progress of surgery; but at the same time we must say that it has many defective points, which we do not conceive to have been much diminished in the second edition. The additions occupy about seventy pages of letter press, with plates, which have increased the price of the book, which should have been avoided, as it must be considered a great disadvantage to a book of this kind; more especially as the author might easily, in our opinion at least, have condensed the whole into as little bulk as the first edition. We consider plates and histories of obsolete modes of operating as unnecessary in a book intended for the dissecting room, as they have a tendency to puzzle, perplex, and mislead the student, rather than to facilitate his studies.

Our author, throughout his work, should have expressed more fully the opinion of the surgical world regarding the propriety of performing particular operations on the living body; for although they may appear excellent methods on the dead, they are not justifiable on the living. As examples of this, we should instance the amputation of the hand at the wrist joint, removal of the elbow joint, &c.

We think he has also forgot some operations he ought to have described; for in vain we looked for directions to pass the male and female catheters: a neglect we are sorry for, as we know the great facility frequent practice on the dead body gives, and the absolute necessity there is for the practitioner introducing it with adroitness.

Having thus mentioned every thing we think either peculiarly interesting or defective in Mr. Averill's description of operations, we shall conclude, hoping we have said enough to induce the reader to consult the work itself, where he will find much useful information. We are convinced that no pupil intending to study the operative branch of the healing art, ought to be without it; and as a work of reference, it should be in the hands of every practical surgeon.

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*forming a useful Library of Practical reference.*

**I. ANATOMY.**

**LIZARS' Anatomical Plates. Part VII.—THE BRAIN.**—This splendid work increases in interest as it proceeds. The plates of this Part are all coloured, because without this, the brain could not have been so properly understood from engravings. Mr. Lizars has followed the common method of dissection adopted in the schools, though he confesses, that the mode of development pursued by Varolius, Vieussens, Gall, and Spürheim, is more connected and natural, and has lately been confirmed by the assiduous labours of Tiedemann. This anatomist has also shown the frivolity of many of the minute and multifarious points described by Vicq D'Azyr, Malacarne, and Reil. Mr. Lizars, in the present part, has added much to its value by particularizing the important discoveries of Tiedemann. He promises a view of the natural system of the brain, when he has completed the plates according to the system of the schools.

**SCARPA on the Minute Anatomy of the Bones.**—In an excellent paper on this subject, this distinguished author, from many experiments, chiefly on the incubated egg, concludes:—

“ 1. That the cartilages were the models of the future bone, and all the parts of the bone visible, existed in the form of cartilage.

“ 2. The reticular or cellulous bony structure, which first began to appear about the middle of the cylindrical bones, was always immediately preceded by a wrinkling of this part.

“ 3. That the cartilaginous model is changed to bone by the action of the sanguiferous vessels, and the addition of earthy matter.

er, in the rugose cartilaginous tracts, by which means the osseous network is made.

" 4. In the incipient state of ossification, the whole height and thickness of the bony pipe of cylindrical bones, both without and within, is light, downy, and cotton-like, having no trace of hard covering externally.

" 5. When the ossification is perfected, the walls of the cylindrical bones receive an increase of density about the middle of the bone, with a diminution of its breadth, as the *reticular texture* is more closely drawn together than before, and compacted in the tracts and alveoli. What forms the external crust or cortex of the bone, is nothing more than the light, reticulated, cellulous structure brought into a hard body near the surface of the bone, and this, both in the cylindrical and flat bones, does not appear about their middle or centre, before the entire ossification of the cartilaginous model.

" 6. The sponginess, which is greatest in the extremities of long bones, is by no means derived, as many anatomists teach, from those lamina or tables, which pass from the walls of the bony tube, and go into the medullary cavity, but it is to be referred to the primordial cartilage, which at first stretches the cones upwards through the medullary cavity, and at length the areolæ and cancelli being removed, expands more fully, and swells very much like tuberosa sponges in the extremities of the long bones.

" 7. Finally, the original more minute texture of the cylindrical and flat bones, both in the incubated egg, and the very early human fetus, (when indeed both the bones, scarce begun, are still flexible and light) are nothing but a slightly reticulated or cellular substance—and moreover, if sometimes distinct little spots, remote from the centre of ossification, they are at length consolidated, and peculiarly interwoven with the portions next them, the whole bone being thus formed by retiform structure.

" In the next place, since we find this to be the fact in the first solution of bone, let us consider the more minute structure of the bones in detail—especially the nature of the *cortical* substance of a bone, which is most manifestly made up from the osseous network compacted—this, which has been detected by the synthetic method, I feared not to be able to confirm by analysis, as the hard external part of bones may be wholly cleared of their earthy particles, and then, being gradually softened, their peculiar structure can be clearly shewn.

" Therefore, I kept the tibia of an adult man in dilute muriatic acid, sufficiently long to extract the earthy particles—by this process, common to anatomists, the very hardest bones are converted into a cartilaginous substance, of great flexibility and translucency, without in the slightest degree changing their natural forms. When I had reduced these bones to this state, I macerated the cartilaginous residue in pure water, in the same manner as is done when we wish to reduce membranes, viscera, skin, tendons, or

sponeuoses to cellular substance. By a long continued experience, I have at length learned to reduce the external covering of the tibia of an adult, to a downy reticular texture, similar to that which is found in the extremities of the bone, except that the close and much compressed texture of the cortex appears loose and dissolved in the medullium and tuberosity of the same tibia. In fact, when the parenchyma of the tibia was cut perpendicularly, no vestige was found either externally or internally of fibres—not the slightest trace of lamination, or plates, in the thickness of the bony tube—but the whole and hardest crust of the tibia throughout its extent, appeared to be formed of *cellulous* structure, so disposed in cancelli and tracts of network, that what belonged to the superficies of the tibia was much compressed and gathered on itself, and the cancelli gradually relaxing, and enlarging more and more, until they were swelled out to that sponginess, found in the medullary cavity and extremities of the bone.

“ I have with much pleasure observed, that the compact substance of the tibia, now under consideration, is of a *cellulous* reticular structure, when this cortex has been deprived of its earth and moisture, and afterwards placed in oil of turpentine. For, on account of the high degree of pellucidness of a bone thus treated, the slight network of which it is ultimately composed, may be clearly seen—and the naked eye can discover without error, that the very hard crust of bone is really of a cotton-like texture, and made up of very short branching tracts, variously joined and interwoven.

“ The same circumstances were manifested by a section of the very hardest portion, taken from the middle of an adult tibia, suspended in spirits of wine, after the earthy matter was removed, and carefully examined by reflected and refracted light. The soft *cellulous* texture was shown, in which small cones of the same soft substance of different figures adhering together, formed here and there larger and smaller areolæ, nearly like the soft cellular texture.

The *reticular* structure is not only to be seen in the cylindrical, but also in the compact tables of flat bone in adults. Thus the internal and external crust of the frontal and occipital bones, being made flexible and pellucid, and suspended in oil of turpentine, the whole is found to be in every part *reticular*—so great is the resemblance of this crust to the structure of cellular texture, that it might readily be mistaken for a membrane reduced to a cellular web, by long continued maceration. However, I have remarked the form of the cells in the crust of flattened bones, to be different from those peculiar to the network of cylindrical bones—that, for instance, the areolæ in flat bones are more oblong than in the cylindrical—as if the *cellulous* spaces and areolæ of the flat bones had been drawn in different directions, while the bones were yet soft and cartilaginous. Hence analytic examination of the cortex of hard adult bones shews, that there is almost the same disposition of principles in the construction of the hardest parts of bones—as in the embryo at their first evolution, and the conversion of car—

tilage into bone—that all the bones, even the very hardest, are composed of a collection of small tracts, which extend through very short spaces, and unite at different angles, *forming a network*. It is not from conjecture, therefore, but the force of positive observation, that we declare the opinion hitherto taught in anatomical schools, that bones are formed by tables, lamina, and filaments, is unfounded, and must be rejected as untrue; and we affirm, that all the bones, whatever be their figures, are, in their minute structures, *cellulous and reticular*; sometimes very close and compact, as in the cortex of very hard bone—at others, loose and free, as in the cavities and tuberosities of cylindrical bones. Those short tracts, which anatomists have mistaken for bony fibres, can neither be followed in the length or breadth of the bone, nor do they ever attain any notable length.”

*The Phrenologists, and the Frontal Sinus.*—As the frontal sinus is rather a stumbling-block in the path of phrenologists, they are anxious it should appear to get rid of its existence. By way of explanation, we copy the following from an American Journal, containing the paper of Scarpa on the Bones:—

“In relation to the pituitary sinuses of the nose, among the dissections who affirm these cavities to be entirely wanting in the *foetus* at nine months, (for many anatomists are of this belief,) some teach, that these receptacles in adults are to be attributed to the action of absorbent vessels. For, say they, the material is absorbed from the middle of the frontal, sphenoid, and maxillary bones, and is replaced at the margin, forming new and large cavities. I freely confess, that there is much excellent testimony to prove the great power which the absorbent vessels possess in removing both fluids and solids. Nevertheless, granting all this power to the absorbents, I do not understand why they do not equally remove the whole substance of the bone, as well as make local excavations at certain points. But passing over these disquisitions and doubts, we cannot withhold our admiration at some of the recent writers on osteology, who deliver it as thoroughly investigated and certainly established, that these sinuses are wanting in the *foetus* at birth\*—not recollecting that the celebrated Albinus has described many of these sinuses in the *foetus* of nine months, and illustrated them by plates. In fact, I have before me, in a *foetus* of this age, the *ethmoid* cells as delineated by Albinus, and also the *maxillary* and *spheno-basilar* sinuses proportionally as distinct as in the adult. The *spheno-basilar* sinus, at this tender age, is not only begun, but it is already fairly

\* “What would Scarpa think of the positive assertions made very recently, and worst of all, *republished* in *Philadelphia*, that the frontal sinuses do not exist in every individual—and that “a gentleman of the medical profession, who had finished his studies at *Edinburgh*,” dissected carefully at *Paris* for “*seventeen months*,” and could not find the *FRONTAL SINUS*, except in a single instance, and that in the head of a “mad woman!!” See Combe’s *Essays on Phrenology*, [American Edition,] p. 83. and *passim*. J. D. Godman.”

divided into two parts by an interseptum. The frontal sinus is the only one whose rudiments are obscure in the fœtus of nine months, yet it is not entirely wanting—but at that age, the frontal sinus is not sufficiently distinct from the æthmoid cells, as is shewn by the flatness above the nose in the fœtus, and the formation of a continued series between the frontal sinus and æthmoid cells in the adult."

*An Elementary Description of the Anatomy and Physiology of the Brain, Viscera, &c.*—This is one of those short cuts to knowledge for the use of junior students, who have either bad memories, or who have neglected their studies. It is arranged to suit the examinations at Apothecaries' Hall, the passing of which, it seems, is of more importance to many, than sound professional attainments.

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## II. PHYSIOLOGY.

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[From a Correspondent.]

ROLPH on Phrenology\*.—"The title of Mr. Rolph's book, sufficiently shews him to be a decided enemy to phrenology, and we were therefore led to expect that it must have been from decisive arguments that his opinions were deduced. We must say, however, that we have been disappointed in this expectation, and that we do not think he has proved to the satisfaction of any reflecting mind, whether from anatomy, reason, common sense, morality, or scripture, that phrenologists are worthy of the contempt and reprobation, which he has poured upon them. So far as Mr. Rolph's observations consist of arguments, they may be comprised in a very narrow compass. It is not with such unwieldy weapons, that he proposes to overwhelm his opponents, he appears against them in the light armour of raillery and wit; and is less formidable for his syllogisms, than for his sprightly sallies of imagination and his quotations from the poets. We must, therefore, gratify our readers with the following specimens of our author's qualifications, as a wit and a scholar.

"At page 51, he thus concludes his account of physiognomy, and of the claims which it has to our attention, as contrasted with those of craniology. "In my youth, when I read the fabulous story of Pandora's box, I recollect I was highly amused at the ingenuity of the man who first invented it, I presume, to solve the question, whence evil arose. But little did I imagine that I should live to see the day, when men of science would pretend to demonstrate

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\* *Strictures on Phrenology, shewing that Anatomy, Reason, Common Sense, and Scripture, are not in accordance with Phrenological principles, by THOMAS ROLPH, Surgeon, &c.*

that the head of every mortal is a natural box of the same description—a box of bone, stored with good and evil, over which he has no control. Surely these men, like Pandora, must be highly gifted from above, or they would never have been able to make this wonderful discovery !!!

"Who doubts whence evil comes and wanteth light,  
"Should read our feel-skulls' schemes, they'll set him right,  
"Presumptuous men! Ye real Pandoras to the rising generation."  
"Miliora pii docuere parentes"—!!!

When treating of "the effects that injuries of the brain have on the mental phenomena." After expostulating with Mr. Combe on his incredulity, as to Dr. Ferriar's observations, shewing the inconsequence of his reasoning he apostrophizes him in terms equally forcible and appropriate. "O sapient reasoner,"—"worthy pupil of a worthier master"—"courteous phrenologist, admirable logician"—"Eris mihi magnus Apollo." We, however, notice this relation less, on account of the profound erudition which it discovers, than for the sake of the facetious paraphrase which is subjoined at the bottom of the page.

"My Merry-Andrew shalt thou be"—!!!

On these passages we shall add no further comment, than that expressed by the notes of admiration we have appended to each of them.

As a reasoner, our author does not appear with the same éclat, as in the characters in which we have just been admiring him. His preliminary observations upon body and mind, being taken chiefly from the ancients, and above all from the poets, need not be expected to contain any thing very new, or indeed very comprehensible. His account of the argument against phrenology, derived from anatomy, is good enough so far as it goes, but deficient in many important particulars. We do not think he succeeds very well in his attempts to prove that the phrenological observations made by the professors of the science upon the heads of individuals, are not in accordance with the characters of those individuals, for he does not sufficiently advert to the reciprocal modifications which the different organs produce on each other: and in a similar way we think he fails in his argument derived from scripture characters, by not taking into account the influence exerted by external circumstances, even over the most fully developed organs. Upon the whole, we think the time has gone by, during which Mr. Rolph's work might have been favourably received by the public.

**BELLINGERI on the Spinal Marrow.**—"Respecting the disposition of the cineritious substance in the centre of the spinal marrow, concerning which anatomists have hitherto greatly differed. Lieutaud said it had the shape of two crescents; Winslow, of a horse shoe; Huber, of the os hyoides; Monro, of a cross; and Haller, of four lines, or a double cross. Gall accurately delineated the form of the cineritious substance as having this figure)-(. The description given by Rachetti, agrees well with that advanced by Lieutaud.



" In preparing the spinal marrow for examination, Dr. Belling remarks, that experience proves the fuming nitric acid to be the best agent for its coagulation, but it is to be observed, that if well diluted, the colour of the nervous matter is destroyed—whole becoming of a deep yellow. When the acid is diluted it gives merely a distinct sensation of acidity to the tongue, it effects the desired hardening to the greatest advantage, and the preparation may be kept for an indefinite period. Without such coagulation, it is scarcely possible to perceive the structure of the medulla unless it is slightly affected by cold, on account of the softness and semifluidity of its substance.

" When the medulla is thus coagulated and cut transversely, the form of the cinereous and fibrous, or medullary texture, is more evident—the cinereous in the human medulla, and in that of the ox, having the figure )-(, but this is varied somewhat in different parts of the spinal marrow, according to its quantity, position, and figure. These variations he considers as being of considerable importance, both in anatomy and physiology, and describes the appearances presented by sections of the medulla, made in different parts of its length. Our limits do not allow us to give all the details of his observations, for which we refer the reader to the original. The general conclusions, however, may be presented in condensed form.

" From the disposition of the cinereous substance, and the presence of the sulci, it is evident that the spinal marrow is divided into six whitish or medullary bundles, the two anterior of which are in great part divided by the middle anterior sulcus, but communicating at the bottom of this sulcus with each other by white matter—but the anterior bundles are in great part divided from the lateral, by the anterior horns of the cinereous substance. Yet in this region \*, the anterior and lateral fascicles inter-communicate for their anterior horns do not entirely reach the periphery of the medulla; there are finally two posterior fasciculi, both almost divided by a middle posterior sulcus, and also wholly divided from the lateral fascicles by the posterior horns of the cineritious substance and by collateral posterior sulci. A comparison made of the various bundles, shews at the superior part of the spinal marrow, as almost all the other portions, that the lateral are the thickest, next the posterior, and last the anterior fasciculi.

"Bellingeri proposes for these fasciculi, the names of *cerebra* for the anterior, because they communicate with the pyramidal bodies, and directly with the cerebrum †—*retiform* for the later

\* Immediately above the first cervical nerves.

† In a note, Bellingeri states that Tiedemann published an account of this demonstration of the direct communication, by means of nervous fibres between pyramidal bodies and the cerebrum in the *Annali Universali di Medicina*, T. XXI, p. 421. The same demonstration, was made in Philadelphia (nearly a year before the reception of Tiedemann's article,) by Dr. Godman, and appended a note to the last American edition of Richerand's Physiology.

because continuous with the retiform bodies—and *cerebellous* for the *posterior*, which are continuous upwards with the *cerebellum*.

"In every case he found—first, that the quantity of the whitish or medullary matter by far exceeded that of the cineritious substance, from the commencement of the spine down to the sacral region, but there the quantity of both substances was equal, or the cinereous predominated; second, this substance was most abundant in the cervical, the middle of the lumbar, and the whole of the sacral; third, the former of the cineritious substance is like this ) ( at the beginning of the spinal marrow, and of this figure throughout the whole track )-(, except at its extremity, where the figure was quadrilateral; fourth, the cineritious substance, or the track uniting their semicircles, was more or less placed at their anterior part, from the beginning of the spine to the middle of the lumbar region, but there and in the sacral region, it either occupies the centre of the medulla, or verges a little more posteriorly; fifth, the anterior horns of the cinereous substance, are every where thicker than the posterior, and at no point extend to the periphery of the spinal marrow; sixth, it is uniform that the middle anterior sulcus, in no place comes into contact with the cinereous substance, and on the other hand, the middle posterior sulcus throughout descends to this substance.

"As to the origin of the posterior roots, they come out directly from the posterior collateral sulci, wherever these sulci are present, and through a little canal formed by the pia mater, they arrive even in contact with the posterior horns of the cinereous substance—but if these horns are produced to the periphery of the medulla, then the original filaments of the posterior roots go out directly from the posterior horns, pass through the pia mater, and receive a covering from this membrane. Other filaments of the same roots are observed, which arise from the posterior fasciculi, and others from the lateral fasciculi of the medulla, but very near to the collateral posterior fissures. The origin of all these filaments is varied in two ways, as above observed, in relation to the anterior roots—some of them enter the canal formed by the pia mater, and thus profoundly penetrate the medullary substance—and when the pia mater is removed, these little canals are torn off, and leave the above described little points on the surface of the medulla—while other nervous filaments, arising from the posterior fasciculi, as well as from the lateral, go out directly from the whitish substance of the medulla, pass through the pia mater, and receive a covering therefrom.

"Gall has therefore asserted, without foundation, and attempted to demonstrate the origin of all the nervous filaments, even in the spinal marrow, from the cineritious substance. All the filaments of the spinal accessory nerve arise from the lateral fasciculi of the spinal marrow, and penetrate the medullary substance deeply, nor is there any communication between the accessory nerve and the posterior spinal nerves in the spinal marrow of the ox; but in man, the accessory nerve has the same origin, but sometimes it receives all

or many of the filaments of the posterior roots of the first pair, and sometimes, though rarely, even a filament of the posterior root of the second cervical : yet the accessory nerve does not retain these filaments, but parts with them again, to form or increase the posterior roots of the first cervical pair."

**Mr. MACKENZIE on the Action of the Capillaries.**—We extract the following from an excellent article by Mr. Mackenzie, of Glasgow, inserted in the Medical and Physical Journal :—

"The arteries, according to Bichât, are the vessels through which the blood passes by the influence of the heart. They are strangers to the structure of the organs of the body ; they wind into the interstices merely of these organs, and are everywhere imbedded in the cellular membrane : but the capillaries form an essential part of many organs, and they enter into the ultimate composition of every structure ; and every atom of nutriment or of secretion is deposited by them.

"The structure of the capillaries is unknown, and may be very different from the structure of the arteries. The capillaries are too minute to allow of their being separated from the parts with which they are interwoven, so that it is impossible to institute any analysis of their substance, or even to demonstrate their physical properties. That the circulation through the capillaries is independent of the circulating power of the heart ; that the blood, once arrived in the capillaries, is beyond the influence of this organ, and circulates by a power or powers to us insensible and unknown—is a doctrine to which I cannot altogether subscribe ; and yet it is supported by some facts, which I should think uncandid to overlook. The motion of the fluids in the capillaries does not, in all cases, correspond with that of the blood in the arteries ; the augmentation of nutrition and secretion does not correspond with the augmentation of the heart's action ; nor does nutrition or secretion diminish in proportion to the diminution of its action. On the contrary, in the most violent fits of fever, when the heart and arterial circulation are in a state of the greatest agitation, the capillaries are often inactive, nutrition flags, and the secretions are choked. As the febrile paroxysm diminishes, the capillaries begin to re-act, and the natural exhalations and secretions return. How often do we see hæmorrhage from the capillaries, when the heart is in a state of extreme weakness ? How often do we see the exhaling capillaries pouring out large quantities of fluid into the cavities or upon the surface of the body, while the heart is scarcely able to follow up one feeble labouring pulsation by another ? There is little or no harmony, in such cases, between the capillaries and the heart. They have then, in a certain degree, and under certain circumstances, an independent action."

**Mr. MACKENZIE on the Muscularity of the Arteries.**—The following are from the same paper :—

" 1. The arteries exposed in a living animal betray no signs of contraction or relaxation.

" If the aorta be as it were "a second heart\*," urging on the blood by muscular contractions—if all the arteries are muscular tubes, assisting in actively propelling the blood—the vessels will necessarily present a systole and diastole, similar to the contraction and relaxation of the auricles and ventricles of the heart. But if we expose the aorta, or any of the large arteries, such as the carotid, in a living animal, though the blood continues to go from the heart and return to it, as in the natural state of the parts, no contraction or dilatation of the exposed arteries is discernible. On taking the exposed artery between the finger and thumb, the momentum which the blood receives from the left ventricle, is felt to produce a strong pulsation; but there is not the least sign of any action in the arteries themselves, urging on the tide of blood.

" This argument has been fully established by the experiments of Dr. PARRY.

" II. The walls of the left ventricle are more than twice thicker than those of the right ventricle.

" Were the aorta and its branches muscular, and sufficient of themselves to carry on the circulation into the capillaries, it is not probable that the two ventricles should be so strikingly disproportionate in point of muscular strength. Indeed, upon this supposition, this surprising fleshiness of the left ventricle would be but a waste of the material. But if the right ventricle, by its contraction, has to force the venous blood merely through the lungs, while the left, by its contraction, has to force the pure blood into the remotest parts of the body, the striking inequality is perfectly explained.

" III. The asserted muscular contractions of the aorta are not alternate, and they cannot be synchronous, with the contractions of the left ventricle.

" This is an argument which I have always stated in my Anatomical Lectures in the following manner:—The contraction of the auricles is not simultaneous with that of the ventricles, but successive or alternate. Had both auricles and ventricles contracted at the same instant, it is plain that the auricles never could have emptied themselves into the ventricles. Those who maintain the muscularity of the aorta and its branches, appear to me to hold an opinion equally false, as if they had maintained that the auricles and ventricles contracted together. No one doubts that the pulse is the effect of the contraction of the left ventricle, and that it is synchronous with the contraction of the ventricle. Now, if the aorta be muscular, and contract like another ventricle, its contraction must either be alternate with that of the ventricle, or simultaneous. If it contracted alternately with the left ventricle, the pulse would be doubled in number—the blood would betray not merely the momentum it receives from the ventricles, but also that which it

\* *BELL's Anatomy*, Vol. II. p. 88.

would receive from the aorta. If the aorta contracted simultaneously with the ventricle, the latter could never empty itself of blood into the aorta."

**M. DESPRETZ on Animal Heat\*.**—From his investigations of this subject, M. Despretz concludes as follows:—

"1. Respiration is the principal cause of the development of animal heat; assimilation, the motion of the blood; the friction of the various parts may produce the small remaining portion.

"2. Besides the oxygen employed in the production of carbonic acid, another portion of this gas, which is sometimes very considerable in proportion to the first, also disappears. It is supposed generally, that it is employed in the combustion of the hydrogen of the blood. In general, more oxygen disappears in the respiration of young animals, than in that of adults.

"3. Exhalation of nitrogen takes place in the respiration of those mammiferous animals which are carnivorous or frugivorous, and in the respiration of birds, the quantity of nitrogen exhaled being greater in frugivorous than in carnivorous animals."

### III. PATHOLOGY.

**Dr. BANG on Sympathy between the Heart and Liver†.**—According to this author, there exists, besides the general relation between all the vessels of the body, a *vascular sympathy*, which is less understood. By means of this, a disease of one organ can be propagated to another without involving, in the first instance, any affection of the nerves. He relates the case of a patient who had at first a cough of a spasmodic character. His health became apparently re-established, but several months afterwards, he was seized with gastric fever. During his convalescence, he continued to look very sallow, complained of pains in his limbs, vomited bile, and died suddenly without convulsions. On opening the body, the liver was found to be perfectly sound but very large, and the gall-bladder very full. The heart was also very large, and part of the apex adhered to the pericardium. The two ventricles were obstructed by white polypos concretions.

**Dr. HOSACK's Pathology of Fever.**—

"Whence," says our author, "has arisen the discordant, and, we may almost say, the empirical practice, that fills the pages of the best writers on fevers, and that is even to be found in the truly valuable works of Boerhaave, Cullen, Fordyce, Wilson, and others? We answer; it is in a great degree ascribable to the local views of

\* Annales des Chimie, XXVI. 360.

† Bibliothek for Læger. III. 243.

the animal economy, to which some of those writers have been limited by their own hypotheses, and which practitioners, relying upon the authority of great names, have hastily adopted.

"Fever, in the opinion of the writer of these remarks, is a disease of the whole system; it appears no less in all the faculties of the mind than in all the functions of the body; it shows itself in every organ of our frame, and affects every nerve and fibre of the system; the absorbing, the circulating, and excreting systems of vessels, are all affected by it; it shows itself in all the various fluids of the body, as well as in the solids; in a word, it is omnipresent; it has no one pathognomonic symptom, but is constituted by a concurrence of symptoms, and these variously combined in the various forms that fever assumes, depending upon the causes whence it proceeds, and the condition of body in which it occurs. If this view of the subject be correct, it will necessarily lead the physician to more extensive principles of practice; it will lead him, at the bed-side of the patient, to pay due regard to the nervous system, the phenomena it exhibits, and the indications thence arising; but at the same time, it will lead him to notice the changes which may be induced in the secretions and excretions, and the circulating mass from whence they proceed.

"The heart and vessels are accordingly excited to preternatural frequency, even operated upon by the blood and other fluids of the system in their natural and healthy condition, as we see daily illustrated in the progress of all fevers, and in convalescence from fever: we contend that fever, long continued, not only wastes the power of the solids, rendering them more irritable, but by the derangement of the functions and excretions, perhaps by the action of the blood-vessels themselves upon their contents, and especially by the retention of those materials which should have been thrown out of the system as noxious, which in health are constantly ejected, the circulating fluids become changed and vitiated, and thereby become additional sources of irritation to the heart and arteries, whose susceptibility of impression, as we have just observed, is also morbidly increased. From this view of the more irritable state of the circulating system, and the vitiated condition of the fluids, we infer, that unless by some salutary power inherent in the system itself, or by some means suggested by art, the greater irritability of the whole system, and of the heart and arteries in particular, be diminished, or the morbid changes induced in the fluids they circulate, be counteracted, these causes of fever, mutually operating upon each other, must increase, and fever be continued until the vital principle itself be totally expended.—How far, then, we ask, is the attention of physicians directed to these two cardinal objects, in the treatment of the advanced stage of fevers? how far is their practice calculated either to impart vigour to the system, and thereby to lessen the morbid sensibility of the nervous and moving fibre, or to counteract the septic tendency of the circulating fluids, which it obtains in most fevers of the continued type?"

**Mr. ANDERSON'S Case of Irritative fever \*.—**

"Mrs. C—, aged forty, of a strong healthy constitution, and mother of a large family, whilst in the daily practice of washing and dressing a suppurating wound in the neck of one of her children, complained of pain and tenderness in the last joint of the middle finger of her right hand; the knuckle of which was swelled and inflamed, and on the inner side there appeared the remains of a slight scratch or wound, of which she could give no account. She was desired to apply the liq. plumbi acet. dilut. to the part affected, and on my next visit the pain and inflammation had subsided. The following day she felt considerable pain above the clavicle on that side, extending to the ear, although there was no external appearance of inflammation in that part, nor any tenderness in the arm or finger first affected. As she had become rather feverish, she took some purgative medicine, and afterwards the mist. salin. cum vin. antim.

"The next day, the pain had increased along the side of the head; and the same night she was seized with delirium, which, however, left her in the morning. The pain above the clavicle had now subsided, and she complained only of a slight headache, and want of sleep; her pulse was about ninety, and her skin cool and moist. She passed the day very tranquilly, but again became delirious through the night; which continued at intervals during the following day, when she was seen by Dr. Babington, who, upon learning the history of the case, proposed that Mr. Travers should be consulted the next morning.

"When we visited Mrs. C—, the following day, we found her very delirious, with a rapid pulse and constant watchfulness. Mr. Travers, conceiving that the present symptoms might arise from irritation of matter under the sheath of the tendon, made a deep incision into the joint of the finger, from whence a very small quantity of matter was evacuated; but the symptoms were not relieved by the operation. She was bled, and took purgative medicines, which latter acted very freely; and at night a large dose of opium was administered, but without procuring her any sleep. Twenty-four leeches were applied to the hand and arm, which were constantly kept fomented and poulticed. On the next day she was again bled, and took the mist. camph. cum ext. hyoscyam. every four hours; but without experiencing any diminution of the delirium, and without producing sleep.

"In this manner she continued for some days, when, finding her strength much reduced, she was ordered dec. cinch. cum acid. sulph. dilut. Her restlessness and incessant delirium continued to increase until she died, which event took place about three weeks from her first complaining.

"Upon examining the hand and arm after death, the tendons in the palm of the hand were found in a sloughy state, and a collec-

\* Med. and Phys. Journ. Feb.

tion of matter had formed under the ligament. annul. of the wrist ; but the whole of the arm appeared free from disease.

" In this case a very remarkable circumstance occurred : the servant who fomented and poulticed Mrs. C.'s hand, in a few days after the finger was opened, was attacked with violent inflammation and swelling of the hand and fingers, afterwards extending to the arm ; and several collections of matter were formed, which were opened. Her health suffered so severely from this attack, as to excite for some time considerable apprehensions for her life."

**M. VILLERMÉ on Inflammation\*.**—We present our readers with the following table of the organic changes resulting from inflammation, as drawn up by M. Villermé :—

" 1. *Lesions, or immediate alterations.*—Unusual accumulation of blood in the minute vessels—redness and tumefaction of the inflamed parts—greater consistence of those which are soft.

" 2. *Lesions, or organic changes, which are terminations of inflammation.*—Augmentation of volume—hardening—hepatization—dropsy serous infiltration—opacity of tissues which are naturally transparent—suppuration—false membranes—purulent infiltration—purulent drains—abscess—deposition by congestion—vesication—softening—fleshy excrescences—narrowing and obstructing of vessels and canals—adhesions, 1st, between surfaces naturally free (serous and mucous,)—obliteration of serous cavities, bridles or bands traversing them—obstructions—2d, adhesion between accidental surfaces—cicatrization by the first intention, cicatrization by the second intention, with or without destruction of parts, (false membranes.) Erosion, or ulceration—perforation—gangrene—hospital gangrene—scirrhus—fungus hæmatodes—some other morbid structures not yet well understood. Cancer—tubercles, 1st, scrofulous ; 2d, of serous membranes. Accidental tissues, having something analogous in the economy, cartilaginous and cartilagineform, (*cartilageniforme*) osseous and ossiform, (*ossiforme*)—fibrous and resembling fibrous, (false joints)—mucous (membrane of fistulous openings)—dermoid, serous, (cysts)—cellular—particular monstrosities—congenital occlusions, &c. Sanguiferous vessels of new formation or creation—organization of the fibrin of the blood, of pus, of false membranes, &c., and conversion into laminated, serous, &c., structures—accidental organs, apoplectic cysts, &c., membranous canals of fistulæ—synovial capsules of false articulations.

" 3. *Changes which are the remote consequences of inflammation, and which are not effected until this has already ceased.*—Return of parts to their natural state : restoration of obliterated cavities—restoration of the obliterated medullary cavity of a bone—reproduction of the marrow and medullary organ—return of canals and vessels to their ordinary dimensions—reproduction of fat.

" It is sufficient, (adds M. Villermé,) when we have a tolerably profound knowledge of pathology, to glance at this table, in order

\* Journal Générale de Médecine.



to perceive how numerous and varied are the organic changes of structure which constitute the subject of this article. It will be at once recognized that there are some so intimately allied to inflammation, that we cannot imagine this to exist without them—others accompany inflammations, marking their intensity, their duration, specific character, their site and particular tendency, &c., while others are not to be found until the inflammatory action has passed away. The first are the inflammation itself—the second mark, by their formation, the actual existence of the inflammation—and the third show that it has ceased.”

*M. SCOUTETTEN's Case of Hypertrophia of the Brain\*.*—

“Peisset, a child, five and a half years old, born of healthy and sound parents, exhibited an extremely large head, equalling in size that of a strong healthy adult; the development of which had proceeded so imperceptibly, as not to furnish his parents with any idea as to the time it first began to enlarge. The forehead was elevated, but not prominent: the protuberances on the os occipitis had attained a very large size. For some time, this boy did not complain of any pain; he was not constrained to keep quiet by any other cause than the weight of his head, and when he wished to walk or run, he suddenly threw himself forwards, and then generally fell. These inconveniences, however, did not seem to increase; and during the last year, he frequently presented himself at the Military Hospital of Metz. There was nothing remarkable in his intellect; he understood and remembered very well what was said to him, but he did not recollect any occurrence of his previous life. When he sat down and remained quiet, he frequently fell asleep, but otherwise he had no remarkable heaviness. All the functions of young Peisset were executed naturally; and, without any cause appearing to give rise to it, suddenly they observed, in the beginning of September, 1823, his appetite fail, at the same time that he was thirsty, and had a sort of flying pain in the epigastric region. The belly still remained soft; his pulse was hard, full, and frequent; but still they did not perceive any alteration in the functions of the brain, or in the head, although there was certainly a degree of heaviness, from which he was directly roused on speaking to him. His stools were abundant, favoured by the exhibition of castor oil twice, and by emollient enemas. These means caused the evacuation of several large worms, but in other respects he was not much relieved. During fifteen days, the morbid phenomena did not experience any material change. On the sixteenth, the patient was suddenly (and for which no cause could be assigned,) seized with an aggravation of his symptoms. The functions of the brain became entirely abolished; the pupil was dilated, although the iris still retained the power of contraction in a high degree; his respiration was embarrassed; his pulse flagged and became soft; and about four o'clock in the afternoon, he expired.”

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\* Archives Générales de Médecine, Janvier.

" *Dissection*.—External appearances : Head extremely large, and very much resembling that of an adult of large stature ; the posterior part very greatly developed ; the eyes sunk in the orbits ; the belly slightly enlarged ; the inferior extremities rather small and thin. The skull was from a line and a half to two lines in thickness ; the places where the sutures are situated did not appear thinner than the other parts ; the meninges of the brain adhered very closely to the skull, and required rather powerful efforts to detach them. M. Scoutetten did not remark any alteration in the structure, but the vessels were distended with blood ; the membrane was extremely red all over, and showed in many points very distinct exudations of blood ; as also many white patches, formed by the thickening of the parts. The plexus choroides was at the same time highly injected. The brain was greatly enlarged, and exhibited throughout its structure much greater density than is generally met with in persons five years of age ; its structure was of a reddish colour, but did not show any signs of morbid alteration. The enormous development of the brain seems to have taken place chiefly on the upper parts and sides of the hemispheres. He now made a perpendicular incision into the ventricles, of the depth of three inches, leaving only about an inch of the base undivided. The cavity of the ventricles contained only a very small quantity of reddish serum."

*M. ANDRAL'S Case of Inflammation of the Thoracic Canal.*—

" The annals of science possess but few observations respecting the organic alterations of the thoracic canal, and of the vessels which terminate in it. These alterations are, however, very rare. I have dissected with care the thoracic canal in more than three hundred bodies, and I have only found it five times in a state of disease :—in two cases its parietes were the seat of an obvious state of inflammation ; in a third case it was obliterated ; in a fourth it was cancerous ; and, finally, its parietes were, in the fifth case, sound ; but a foreign, solid, and apparently a tuberculous matter filled its cavity. The rare occurrence of such cases induces me to publish them : they furnish some materials to the history of diseases of the lymphatic system, diseases respecting which we possess as yet so few positive ideas."

" A female, forty-seven years of age, who was afflicted by chronic nephritis, died in the hospital *La Charité* during the course of the year 1824. This female had arrived, by degrees, at the last stage of marasmus, and hectic fever had consumed her. She had also presented all the symptoms characterising nephritis. The right kidney was found changed into a number of cysts filled with pus : behind it existed a vast purulent collection, which extended as far as the iliac fossa. Instead of finding the thoracic canal empty, or filled with a little transparent serosity, such as is generally found, I discovered, between the descending pectoral aorta and the *vena azygos*, a white chord, of the size of a writing pen. A more at-

tentive dissection soon discovered to me that this chord was the thoracic canal distended by purulent matter. It was thus filled from where it passed through the diaphragm to a little before it opened into the subclavian vein. In the whole of this extent, the internal surface of the vessel presented a red colour, the intensity of which was not the same throughout. In one part a number of vessels were seen agglomerated and considerably injected; and in another part the redness was uniform, and similar to what is frequently observed on the internal surface of arteries, but it seemed not to result from vascular injection; one might say that the internal surface of the canal, at these parts, was as if painted red. This colour resided entirely in the internal membrane, which was considerably thickened, and which could be separated from the external tunic much more easily than in a state of health. The rest of the lymphatic system presented nothing particular.

"In this case were found united the most decided appearances of inflammation, viz. redness of the textures, their thickening, and lastly, pus. But a difficulty may be here started—it may be said that the pus was not formed in the thoracic canal, but was carried there by absorption, and that it was in consequence of its contact with the internal surface of the canal that this latter was inflamed. In whatever manner the fact may be explained, it was not the less certain that there existed inflammation of this duct, either primitive or secondary.

"I had occasion to see another case of inflammation of the thoracic duct, at the Hospital for Children, in a boy, eleven years of age, who had been under the care of Dr. Guersent, and who died of croup, complicated with pleuro-pneumony and gastritis, in the course of June 1823. The parietes of the thoracic canal appeared to me much thicker than natural, and also much more friable. The cavity of the canal contained but a small quantity of transparent serosity; but its internal surface was, in its whole extent, of a lively red colour. Observed between the eye and the light, this redness seemed to arise from a minute vascular injection. A number of tumefied and reddened glands, with tubercular points in the centre of each, were developed along the whole course of the thoracic duct: a still greater number was found in the abdomen, around the enlargement in which the duct commences.

"This case differs from the first, in the circumstance that no pus was observed in the canal. The existence of inflammation was, however, proved, not only by the redness, but also by the change, as respects thickness and consistence, which the parietes of the canal had undergone. It should also be remarked, as a circumstance not observed in the first case, that inflammatory enlargement of the adjoining lymphatic glands was present in this case, along with inflammation of the canal."

• *Mr. BAMPFIELD'S Pathology of the Spine.*—As we have not been able to overtake a review of Mr. Bampfield's book on the

spine for our present Number, we shall, in this article, give an extract from his pathology:

"As long as the constituent parts of the vertebral column accurately maintain their relative proportions, agreeably to their natural formation, no permanent curvature or angular projection can take place. If, in this state, a wedge were applied between any two vertebræ on any side, the spinal column would be forced out of its spinal line, and incline to the opposite direction.

"Thus, if it were applied posteriorly, it would cause it to deviate from its spinal line, and bend forwards, and *vice versa*; and if the wedge were driven in between two vertebræ on the right side, it would occasion the column to incline over to the left side, and *vice versa*; and, were it not for the retaining powers of the muscles, ligaments, &c. the spinal column would be dislocated or overthrown altogether. In this point of view, as well as in those we have already taken, of the effects of ulcerative or progressive absorption of the horizontal surfaces of the vertebræ and intervertebral cartilages, permanent curvatures, or angular projections of the spine, are merely mechanical consequences; and if we can demonstrate that a power equal to, and acting on the principle of a wedge, be applied in such cases as a cause, I shall prove the position just laid down. Here I must recur to the old exploded doctrine of unequal growth, or malformation of bone, which has been assumed, by Liason, and others, as an efficient cause of distortion; a doctrine exploded, too, against the evidence of the most perfect of our cases: for, in the anatomical museums, specimens of deformity arising from the unequal and irregular growth of all the bones, and course of the vertebræ, may be seen; in some of which, the malformation or inequality is produced by diseased actions, but, in others, simply by an exuberance of the 'formative principle,' or by an error of nature, in exciting a pruriency, or occasioning a deficiency of growth. It can only be intended, however, to offer illustrations of the effects of this error of nature in the vertebral column; and this I am enabled to do in a manner that appears satisfactory, by resorting to the appearances which dissection discloses in H. Pittam's and other cases, as A. Selby's, and examining the preparations of the various distortions of the spine, that are placed in the Hunterian, Brooks', and other splendid collections of morbid anatomy. In viewing the preparations, and in the dissection of spinal deformities from irregular growth of bone, the disproportions of the different bodies and intervertebral cartilages—that is, between their outer and inner lines of curvature, are most striking; the thickness of the vertebræ and intervertebral substances being sometimes, on the outer line of curvature, double, or even treble that of the inner line. It therefore remains to be explained by what process this immediate cause produces its consequences.

"When an increased growth of bone takes place on one side of the spinal column, which is a flexible one, it must necessarily ele-

vate the parts above it on the same side, and make them recline over to the opposite side, which is thinner, and that must now sustain the greater share of weight; one consequence of which must be, that a greater degree of pressure will be made by a superincumbent weight on the thinner side, to which it is reclined, whilst it will be diminished on the side which the increased growth has elevated: and, indeed, whilst the superincumbent weight will press the surface of the joints more closely together on one side; it will tend to open the joints, or separate their surfaces, on the other, and put the ligaments on the stretch, and (as it were) create a space for interstitial deposition.

"Now pressure is the strongest power we possess of producing local absorption, and, as increased growth of bone is a cause of a permanent nature, the pressure too becomes permanent, (except in particular positions of the body,) and occasions absorption of that part of the bone, and of the intervertebral cartilage, unduly pressed upon. Thus, increased growth on one side, and progressive absorption, occasioned by pressure on the opposite side, both conspire to the same end, and both operate in destroying the natural proportions of the vertebræ, and of deflecting the erect spine from its spinal line to the form of a curve; and, in the degree that increased growth takes place on one side, and increased pressure and absorption on the other, the greater or less must be the curvature. Besides, as these causes extend their effects, the number of the vertebræ involved in the curve will be increased, until many are bent into an arc, some of which have had their dimensions increased on one side, and all of them have been diminished on the other; which is a very important fact to be borne in mind in the treatment. During this deforming process, we may reasonably believe the muscles and ligaments offer some resistance to its progress, but effects show their resistance is overcome."

*Dr. ALISON's Pathology of Scrofulous Disease.*

"1. The differences in the symptoms and progress of inflammation, when scrofulous and when healthy, appear manifestly to indicate in the former case a languid state of the circulation, particularly in the capillary vessels of the diseased part.

"2. The hereditary disposition to scrofula is chiefly transmitted from parents, and is most observed in children, who show evident marks of constitutional debility in other respects.

"3. There is no state of the body, as every practitioner knows, in which scrofulous action is so easily excited, as the state of great and often permanent debility, which remains after severe febrile disease, continued fever, small-pox, measles, scarlatina, or which follows the long-continued use of mercury, or accompanies amenorrhœa.

"4. The season at which scrofulous diseases have been observed to prevail most in this climate, is not that when cold weather has recently set in, and is most productive of disease in general, but the end of Winter and the Spring; and they are then chiefly observed in those young persons who have manifestly lost strength during

the continuance of the cold weather. The gradual diminution of strength in weakly persons during cold weather is naturally to be expected, (conformably with what we know of the agency of cold on the healthy body, and with other physiological principles,) from the habitual chilling of the surface, and more particularly from the little exercise taken by these persons in such weather. It is commonly stated, likewise, that scrofulous diseases are not so prevalent in the coldest climates as in milder, but moister climates, such as that of Britain, where the temperature, during most of the Winter and Spring, is from 32° to 45°, and the air usually moist; and it is perhaps to be expected, that such weather will be more weakening and depressing to the constitutions of young persons than colder, wet dry and frosty weather; because it will restrain them more from taking exercise, and will allow of less evaporation from the surface during any exercise that is taken. The observations made on this head, however, do not seem to me so decisive as they have been thought; because due allowance has not been made for the circumstance of the more northern countries which have been compared with Britain in this respect, being more thinly peopled, and much smaller proportion of their population being the inhabitants of large towns.

"5. The most leading fact in regard to the connexion of the scrofulous tendency with debilitating causes, (and one which is of itself sufficient for the more important practical application that can be made of knowledge on this subject,) is the much greater frequency of scrofulous diseases in the inhabitants of great towns, than in the agricultural population of any climate."

#### IV. MORBID DISSECTIONS.

##### Mr. THOMAS's Case of Rupture of the Heart\*.—

"E. H., a lad, fourteen years old, had complained from childhood of severe dyspnoea and great palpitation, increased by the least exertion, from which I was latterly led to suspect an organic disease of the heart—either ossification of its valves, or aneurism of one of the primitive vessels: the latter appearing rather obscure, from there being no perceptible swelling in any part of the chest. His heart would sometimes beat in such a manner, (there was continually more throbbing than natural,) as to be perceptible through his clothes, even with his coat buttoned. A sense of straitness in the chest, with a dull sensation, rather than pain, at the scrobiculus cordis, would occasionally ensue. Mostly a bluish tint of the lips, slight dilatation of the pupils; appetite and general health good; grew in the ordinary manner; bowels regular; pulse small, quick, and intermitting, and not corresponding with the throbbing of the heart, but the same time at both wrists.

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\* Med. and Phys. Journ.

" In September last, I warned the parents of a sudden death ; and on the 11th of January, 1825, while exerting himself by walking pretty smartly, he called his companion to feel his heart, when he instantly dropped down, and expired without uttering a groan.

" In twenty-four hours after death, I was allowed one hour to examine the chest. On opening the pericardium, I was remarkably struck with the dimensions of the heart, being nearly double the natural size. In this cavity there was a quantity of dark-coloured blood. The principal vessels leading from the heart much enlarged. When the heart was removed from the body, I found a small irregular opening (evidently a rupture) leading out of the right auricle; about three-eighths of an inch long, through which the dark-coloured blood had escaped, and which was no doubt the cause of death. The sides of this auricle appeared quite flabby, and easily gave way to pressure under the fingers. The ventricles were healthy, although their parietes were rather thicker than natural. None of the valves ossified. The foramen ovale closed, and the coronary veins loaded with black blood. The lungs appeared quite healthy."

Dr. IRVIN's Case of Cancerous Duodenum \*.—

" In December, 1821, I visited a patient who had been suddenly attacked with vomiting, and violent pains in his bowels, immediately after having drank a pint of strong beer. The pain, I found, was not confined to any particular part of his abdomen, but appeared to arise from cramps or spasms of the bowels generally. The fluid ejected was complained of by the patient as being very sour and intensely bitter. The quantity thrown up was prodigious. Attention to the spasms being of primary importance, large doses of laudanum and sulphuric æther, together with the application of flannels wrung out of hot whiskey over the abdomen, were employed, and in a few hours put an end to the paroxysm. On my visit the ensuing morning, I found him quite free from pain, but drowsy and stupid from the effects of the laudanum, &c. His bowels having been constipated for several days previously and subsequently to the attack—a large dose of senna, manna, and salts was administered, which in due time produced a thorough evacuation of the alimentary canal. The life of this patient had for a long time been debauched and irregular.

" In April, 1823, he was again seized with paroxysms of pain and vomiting, similar to the first attack, and this was also soon removed by the use of antispasmodics and mercurial purgatives. He was left in so debilitated a condition by this spell, as to unfit him for work, and in the early part of May, the weakness so much increased as to confine him continually to bed. During the month of April he suffered much—having, with but one or two exceptions, an attack of pain and vomiting, at least once in the twenty-four hours—and from the habit of suffering, and disinclination to medicine, most of the paroxysms were permitted to pass off sponta-

\* Chapman's Philadelphia Journal.

neously, without the intervention of remedies. From May until July, I was not called upon to see him, and I learned that during the interval he had given himself up to debauchery. The following symptoms continued daily to affect him, from July until September 3d, the day of his decease. Great pain at the upper orifice of the stomach, accompanied with frequent and severe vomiting of a green coloured fluid—obstinate constipation of his bowels—tongue always furred—colour mostly white, occasionally brown—countenance and skin generally of a pallid appearance—conjunctivæ of a pearly white—nails of the fingers and toes of a pale blue colour. The emaciation of his body had progressed to an extreme degree. Fæces were never evacuated unless through the agency of purgatives—were of a black colour—fluid consistency, and almost devoid of fætor. Two days previous to death, they contained pus mixed with blood. During a considerable period previous, his sleep was much disturbed—often awaking in a fright. Every kind of food was alike palatable to him, and generally remained an equal length of time on the stomach, viz. from two to four hours. Then succeeded pain and vomiting, which never ceased until the stomach was thoroughly emptied. About three weeks before death, a considerable tumour was discovered in the right hypochondriac region, which maintained its prominence for eight or ten days, and then subsided. Before the appearance of the tumour, and while it was present, two physicians of extensive practice were called in, who confidently pronounced the whole of the symptoms of the case to have resulted from *disease of the liver*. This opinion being very different from that I had expressed to the patient and his friends in July, viz. that the disease was scirrhus of the stomach—and that if the liver was diseased, it was a *consequence*, not a *cause*, of the disease of the stomach, I felt extremely anxious to ascertain the true seat of the disease by dissection.

“ Being informed of his death, on the morning of September 3d, I proceeded to the examination, in presence of my friends, Drs. Church and Gazzam, and three or four friends of the deceased.

“ *Dissection. Thorax.*—On raising the sternum, all the thoracic viscera were found in a healthy condition. The heart rather small—right auricle completely emptied of blood—a small quantity of fat scattered over the apex. On cutting a small blood-vessel on the heart, a fluid oozed out that appeared more like a mixture, of five parts water and one of blood, than blood.

“ *Abdomen.*—On exposure of the abdominal cavity, the stomach was seen displaced in a singular manner, and enormously distended. This organ occupied almost the whole of the left hypochondrium—its great curvature extending down to the left iliac region. After its removal from the body, it was opened, and its contents were found to amount to half a gallon of green bile, somewhat diluted with whiskey and water, which had been taken for common drink. It was then slit from one extremity to the other, carefully washed, and, contrary to the opinion I had formed of its condition, not a



vestige of disease was to be discovered in any part of this organ. The liver, also, was free from disease, but adherent on its posterior surface—gall-bladder much distended with thin green bile. Having examined thus far, without being able to detect the seat of the disease, our attention was directed to the duodenum, which was found much enlarged, and externally hard and unyielding. On exposing its cavity, it was found in a cancerous state, and closely studded with tubercles, varying in size from a hickory nut to that of a walnut. The largest of them contained matter resembling cream somewhat dried. The whole surface of the seat of ulceration presented a ragged, uneven, lacerated appearance. The quantity of pus found about the diseased part of the gut, was upwards of a gill. Pancreas natural in regard to situation, but diminished to one half its natural size, and scirrhus. On cutting into it, the interior presented much similarity in colour and texture to that of boiled cow's udder. Duct natural. The intestines were all removed from the body, and spread upon a table, for the more particular examination of the division of the canal. *Jejunum* and *ileum* natural—*cæcum* enlarged and displayed evident marks of inflammation. The coats of the *colon* preternaturally thick, and the calibre reduced to half its natural size. *Rectum* natural. The mesenteric glands enlarged—between the lamina of the mesocolon, were contained several tumours of about the size of a large pea, in a state approaching scirrhus. All the chylipoietic viscera discovered marks of having been in a highly inflamed state, which, no doubt, was the cause of many preternatural adhesions, discovered during the course of examination. Neither the brain nor the pelvic viscera were examined.

“ There is one circumstance in the case detailed, as it appears to me, that affords an important diagnostic in the detection of a particular disease. I mean that with regard to food, either solid or liquid, not having excited pain immediately after its reception into the stomach. Richerand, on the subject of digestion, informs us, that the mean time which food remains in the stomach, before it is forced into chyme, and passes through the pyloric orifice, is from three to four hours. Had I paid sufficient attention to this fact, it is probable that I would have been able to have pronounced a more correct opinion as to the particular seat of the disease. The accession of pain, and its common accompaniment, vomiting, was, I now believe, always simultaneous with the passage of the chyme through the pylorus into the duodenum. From the diseased condition of a portion of the intestinal canal, as observed after death, and the situation it must have been in for a considerable time previous to the event, one may very readily suppose, that the bland and unirritated mass, which, in a healthy condition of the digestive organs, would produce rather an agreeable sensation, would be quite sufficient in this case, to cause, when it came in contact with the raw and ulcerated surface of the duodenum, all the terrible symptoms of which he complained. Another source of irritation would arise from

influx of bile, that must take place during the presence of the chyme in the duodenum—and if it is a fact, that the flowing of the bile through the “ductus communis choledochus,” is caused principally by the irritation or pressure made by the aliment upon the extremity of the excretory duct, it would satisfactorily account for the intervals of ease that were experienced during the period of gastric digestion.”

M. ANDRAL's Case of obliterated Thoracic Duct\*.—

“In the course of the month of November 1821, whilst opening, at *La Charité*, the body of a patient dead of pulmonary consumption, I proceeded to the dissection of the thoracic duct. In the extent of some inches above the diaphragm, this canal was filled with a very considerable quantity of lymph; above this part it was abruptly constricted, and in the part corresponding to the bodies of the fifth, fourth, and third dorsal vertebræ, it was both constricted and deprived of its transparency; finally, from above the third dorsal vertebra to its termination in the vein, the canal assumed its usual calibre and transparency, and was again filled with lymph. I opened the duct immediately above the diaphragm; a fine stilet easily passed until it reached the margin of the fifth dorsal vertebra; but at this point, the stilet met with a sort of cul-de-sac, and could pass no higher—the canal was entirely obliterated in the part which was constricted, and transformed into a sort of fibrous chord. But how came the canal to be filled with lymph above the obliteration? By what route had the lymph been carried into that situation? A minute dissection soon enabled me to discover the existence of a considerable lymphatic vessel—a sort of second thoracic duct—which arose from that part of the principal duct, a little below the commencement of its obliteration, directed its course obliquely from below upwards, and from within outwards, until it reached the vena azygos, proceeded behind this vein, and afterwards reached the upper portion of the thoracic duct, and opened into it at the point above where the obliteration terminated, forming with it a sort of angle similar to that which the thoracic duct itself forms with the subclavian vein.

“I do not attempt to explain how and when the obliteration now described took place. As to the collateral duct, by which means the circulation of the lymph seems to have been preserved, it was chiefly remarkable with respect to its size. Indeed, it is not uncommon to find the thoracic canal accompanied in its course by more or less considerable branches, which are detached at various angles, and which, after a certain space, again approach it and open into it. It was probably, in this case, one of these branches which, subsequently to the obliteration of the principal canal, acquired a much greater volume. This phenomenon is similar to the more familiar one which takes place when the canal of an important ar-

\* *Revue Médicale.*

tery is obliterated. M. Rayer, in his excellent article on *Dropsy*, in the *Dictionnaire de Médecine*, has cited from Sir Astley Cooper a case of obliteration of the thoracic duct, in which, as in the one now detailed, the circulation of the lymph was preserved by means of collateral vessels, which were developed in proportion to the necessity."

## V. SURGERY.

### Dr. E. GRAFE's *Extirpation of a Sarcomatous Tumour*.\*

"Maria Richter, aged 46, a woman of a robust habit, and who had never been the subject of any important disease, presented herself to Dr. Edward Gräfe, having a large sarcomatous tumour growing from her back. The account which she gave of its history was this: that about twenty-two years since, she lived in a farm-house as a servant, and whilst there, was one day engaged in loading a waggon with wood, and that she was, by accident, thrown down, and a piece of wood fell upon her back. That since that time she had felt an occasional uneasiness, which was followed by the appearance of a small swelling, that had continued gradually to increase.

"On a careful examination of the tumour, it was found to hang by a narrow neck, from the back, just between and on a line with the lower edges of the scapulæ; the skin, covering it at that part, appeared to be collected into bands, or fræna, and extended some way upon the surface of the swelling, which became gradually broader in its descent, and reached a little below the crista of the ilium; it was of a firm sarcomatous structure, and gave no pain on handling or pressing on it. It measured twelve inches and a half in length, ten and a quarter in breadth, and seven inches and a half in diameter, and was found to weigh, after its removal, about seven pounds.

"On the 10th of March, in the presence of several surgeons, I made an incision on the upper part of the tumour, and continued it down the centre for a certain distance, dissected back the skin, and separated it from the muscular fibres to which it was attached.

"The edges of the wound were afterwards secured by two sutures and straps of adhesive plaster. The wound rapidly healed, and on the 28th it was so nearly well that it required only a little simple dressing to be applied to it, and in its progress to this fortunate termination, the patient had nothing of any consequence whereof to complain."

\* Gräfe und Walther's Journ. der Chirurg.

## Mr. LIZARS' Case of Gastrotomy \*.—

" In the year 1821, I was requested by my friend, Dr. Campbell, lecturer on midwifery, to visit a woman with an abdomen as large as if in the ninth month of gestation. On examination, the tumour occupied the whole abdominal cavity, and appeared to roll from side to side; the uterus per vaginam felt natural, and her catamenia had been regular, but caused excruciating pain when they occurred. She stated that she was twenty-seven years of age, had born only one child, and in twelve months afterwards had a miscarriage; two or three months after which, towards the end of 1815, she became sensible of a considerable enlargement of her belly, that began on the left side, and which she attributed to several blows and kicks received from a brutal husband, from whom she was now separated; that her neighbours now abused her, and made such complaints to her employers, that they dismissed her. At that time she earned, and now earns, her livelihood by binding shoes. Being now without the means of support, she applied to a county hospital, but was in a few days dismissed, on the supposition of being with child. She then consulted a number of respectable practitioners, but all of them cruelly taunted her with being pregnant. At the end of two years, she perceived a small moveable swelling in her left groin, which she allowed to increase for twelve months, when she came to Edinburgh, and, on consulting a surgeon, he opened it with a lancet, and discharged a large quantity of matter. On examination, this was found to be a lumbar abscess, which she ascribed to a fall on her back three years previously. The evacuation of this fluid did not in the least diminish the magnitude of the abdomen; and she imagined she could distinguish between the pain of the lumbar abscess and that of the tumour in the abdomen. She was admitted into the hospital of this place, and remained for thirteen weeks, without receiving any relief. She consulted the chief medical gentlemen of this city, many of whom pronounced her pregnant, and all of them tried to dissuade her from an operation. Two put her under different courses of mercury; and, after a consultation, one punctured the abdomen for dropsy of the ovarium.

" Before having recourse to the operation of gastrotomy, I deemed it my duty to have the opinion of the principal practitioners of this city, either by personal consultation, or by sending the patient to them. The woman herself also had previously waited on many of them. Some said, that to operate would be rash; others, that I would kill my patient. It was agreed by all, that there was a disease of one or both ovaries; and she had been twice tapped for dropsy of the left ovary, the result of a formal consultation of some of the ablest medical men of this city. Convinced, from the history of the disease in the records of medicine,

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\* *Edinb. Med. and Sur. Journ.*

and from gastrotomy having been successfully performed for volvulus, and from the Cæsarian section, that there was little to apprehend either from loss of blood or peritoneal inflammation, I felt desirous to endeavour to relieve the woman by an operation; but was anxious to have the sanction of some other surgeon or physician besides my friend, Dr. Campbell, who at once offered to assist me. All whom I took to see the patient, and all to whom I sent her, said that the disease was an affection of the ovarium; but all of them condemned an operation. My patient, therefore, abandoned to her gloomy condition, called on me repeatedly, urging me to try the operation, otherwise she would do it herself. At last, as her pain became perfectly intolerable, and she was still urgent, I resolved to operate. During the preceding period, I had directed my attention to the lumbar abscess, and applied caustic, eschar after eschar.

“ Wednesday, 24th October, 1823, was the day appointed for the operation; therefore, on the day preceding, she took a dose of the compound powder of jalap, which operated also on Wednesday morning, so as to preclude the necessity of administering an enema; she also made water immediately before, in order to empty the bladder. The emptying of the rectum by a glyster, and the drawing off the urine, or taking care that the patient makes water, are circumstances of some consequence to be attended to, in all operations of the abdominal cavity. As inflammation appears to be induced generally by exposure to cold, and as these cases succeeded so well in America, I desired the room to be heated to 80° Fahrenheit. When the temperature of the room had arrived to this heat, I placed the patient on a table covered with a mattress, and two pillows supporting her head, and commenced the operation, in the presence of Dr. Campbell, Dr. Vallange, late surgeon of the 33d regiment, Mr. Bouchier, surgeon of the 36th regiment, and several other medical gentlemen, by making a longitudinal incision, parallel with, and on the left side of the linea alba, about two inches from the ensiform cartilage, to the crista of the os pubis, through the skin and cellular substance, when the peritoneum appeared, the recti muscles being separated by the distention consequent on the present disease and former pregnancy. I then made a small incision through the peritoneum, introduced a strait probe-pointed bistoury, and made a more extensive opening, into which I inserted the fore and middle fingers of the left hand, so as to direct the instrument, and to protect the viscera. With this instrument I made the internal to correspond with the external incision; while my friend, Dr. Campbell, who assisted me, endeavoured, but in vain, to confine the intestines within the abdominal parietes. Apprehensive of peritoneal inflammation, of which many said my patient would die, I enveloped the intestines in a towel dipped in water about 98°. I now proceeded to examine the state of the tumour, when, to my astonishment, I could find none. I next requested Drs. Campbell, Vallange, and Bouchier, to make themselves satis-

fied that there was no tumour ; when Dr. Vallance observed, that he felt a tumefaction on the left side of the pelvis. This, on investigation, was found to be a flattened tumour of no great magnitude, at the left sacro-iliac synchondrosis of the pelvis, lying beneath the division of the common iliac artery into its external and internal branches. Having satisfied all present that this was not the tumour which was anticipated—that it was impracticable to extirpate it—and that the uterus and ovaria were perfectly sound and healthy, I proceeded to return the intestines, and to stitch up the wound, carrying the needle as deep as possible, and applying straps of adhesive plaster between the stitches. Compresses of lint were next laid along, and the nine-tailed bandage bound round the body. I then carried her to bed, and gave her an anodyne draught of forty drops of laudanum, which was almost immediately rejected. Ordered her warm toast-water and tea.

“ When the intestines protruded, and baffled all the efforts of Dr. Campbell and the other gentlemen to confine them, I shall never forget the countenances of my pupils and the younger members of the profession. This fact of the intestines being forced out, proves, along with others, that the lungs can be expanded, although atmospheric air be admitted into the abdominal cavity ; the diaphragm acted with great vigour, and with powerful impetuosity. The operation was performed at one o'clock of the day, and by seven in the evening she had vomited twice ; had flying pains in the abdomen, a little hurried breathing, pulse at 100, and some thirst ; she also felt uneasiness from inability to void her urine, which was drawn off by the catheter ; and, as a precaution, I bled her to syncope, which occurred when eleven ounces were abstracted. She lost little or no blood during the operation.

“ This woman perfectly recovered. Vomiting occurred for two or three days after the operation, attended with much pain in the abdomen and fever ; but, by prompt and large bleedings, and a strict antiphlogistic plan, these symptoms were subdued, and she now gains her livelihood as usual.”

Mr. RYALL on the *Purulent Ophthalmia of Infants*.—

“ Assuming it as a principle, that the destructive progress of the disease is influenced more by the specific virulence of the inoculating fluid, than by any other cause, and my great object being to subdue its action on the secretory surface, I have an earlier recourse to stimulants, than the mere definition of acute inflammation would appear to indicate, or than might be deemed expedient by those who consider the discharge merely as a symptom, and that neither the process of restoration is materially affected, nor the organ in any way endangered by its continuance.”

“ By this early substitution of the stimulant and mildly astringent for emollient applications, I have known the discharge to have been suppressed, and the progress of the disease consequently arrested, in very many cases which experience and analogy warrant me in saying, would have otherwise terminated unfavourably, or at

best have been protracted for several weeks : indeed, the very character of the inflammation would warn us against the long use of emollients.

"The purulent ophthalmia of infants shows itself generally within four or five days after birth, in redness of the conjunctiva lining the palpebræ, and in a thin discharge, which, if permitted to rest on the cilia, agglutinates them so firmly, as to require some degree of force to separate them ; in effecting which, a copious flood of tears gushes forth. These appearances are usually accompanied with great impatience of light, feverish heat, exacerbated in the evenings, and not unfrequently with fits. In a short time the discharge becomes puriform, when there is a remission of the pyrexia, the conjunctiva becomes greatly distended, exhibiting, as has been observed, the appearance of red velvet. The eye-lids are now so much swoln, that in the attempt to examine the eye, the orbicular muscles are everted, requiring even force to replace them, and mechanical aid to retain them *in situ*. The bowels, if neglected, either remain costive, or discharge mucous, or frothy and greenish stools."

"If recourse be had, in the early stage of the disease, to medical aid, (which, as has been deplored, particularly with the poor, is too seldom the case,) the treatment is then indicated by the definition of 'acute inflammation.' A leech or two, according to the strength of the patient, and urgency of the symptoms, are to be applied to the under lid. The eye is to be frequently fomented with a decoction of white poppy heads, which should also be injected between the palpebræ ; and, as well to prevent agglutination of the cilia, as to correct the morbid secretion of the tarsi, an ointment, consisting of one part of the ointment of the nitrate of quicksilver, and seven parts of that of spermaceti, should be applied to them twice or thrice a-day. A grain each of the submuriate of mercury and of James' powder, should be given every night, at bed-time, and a tea-spoonful of castor oil every, or every second morning. The lower extremities, and if fits occur, the whole body, should be daily immersed in a tepid bath ; and the apartment in which the patient resides, if it be practicable, well ventilated, since foul air, and crowded situations, are peculiarly favourable to the malignancy, and perhaps to the propagation of the disease."

Mr. M'CLELLAN's Case of Amputation of the Lower Jaw\*.—

"In the Spring of 1821, Mary Rice fell on the pavement with much violence. She was taken up insensible, her chin severely contused, and the front incisors of the lower jaw loosened ; these soon became discoloured, and still less firm in their attachment, whilst she complained of pain, shooting along the throat, from the chin to both ears. In the course of three months, a small, hard, fleshy-looking tumour was observed under the apex of the tongue ; and now the front part of the jaw began to enlarge downwards and

\* *Medico-Chirurg. Review.*

forwards; although there was much pain and loss of sleep, the little patient retained her appetite, and the power of mastication. In the early part of 1823, however, the parts became frightfully enlarged; the bone swelled downwards, and the tumour, beneath the tongue, rose above the level of the teeth, wholly preventing mastication. The disease spread rapidly, and on July 10th, 1823, Mr. McClellan was called in. The patient was six years old, her countenance wan and haggard, and body emaciated. The whole substance of the bone, in front of its angles, projected downwards before the neck, and backwards rather to the left side of the throat, attenuating the under lip, which was much extended. The skin was highly vascular. Her mouth was thrust open by a huge tumour, rising from the inner surface of the inferior maxilla, and protruding in the shape of an enlarged tongue. Above the molar teeth, it was applied to the roof of the mouth, overlapping, anteriorly, and including in its substance the incisors. Its posterior limits could not be ascertained. Nothing but fluids could be taken, and from the difficulty of deglutition and respiration, the tongue must have been driven almost into the pharynx. As the only chance of saving her life, an operation was decided on, and, on the 13th of July, it was performed in the following manner:—

"An incision was made through the integuments, from the left commissure of the lip obliquely downwards and outwards, over the anterior edge of the sterno-mastoideus, so as to command the carotid, should it be necessary to tie it on that side. The anterior edge of this incision was then raised, and the lower part of the tumour exposed. The integuments were next dissected forwards, till the whole tumour was exposed round to the opposite side. The facial artery was at once secured, where it emerges from the submaxillary gland, when the hæmorrhage ceased from nearly all the divided twigs. The insertions of the masseter muscles were then dissected up, to expose the sound bone, which was immediately divided by a metacarpal saw. The tumour was then turned outwards from the mouth, and dissected from the under surface of the tongue, the submaxillary glands, and the muscles on each side. Part of the sublingual glands, and left submaxillary, being tumefied and rather discoloured, they were cut out. Three arterial twigs beneath the tongue required the ligature. Only six or eight ounces of blood were lost during the operation, which took up four minutes and a half. The patient did not faint, but was at first nearly suffocated with the blood which passed down her throat. It being ascertained that no morbid structure was left behind, the large flap was re-applied, and the edges of the external incision kept together by three interrupted sutures and adhesive plasters. The cavity beneath the tongue was partly filled with patent lint, bent into the shape of the lost bone, upon which the hanging integuments were lightly braced by a bandage. After the dressing, the tongue regained its natural situation, and the little patient could articulate, and even drink some water. No pain was felt, and she slept sound-



ly: the bowels were kept open, and broths, &c. given for food. On the fourth day, the dressings being removed, the external wound had agglutinated by inflammation; the internal cavity was suppurating profusely, and granulations having sprung up, the dressings were removed altogether on the seventh day. In three weeks, complete cicatrization, externally and internally. The cut extremities of the bone had ossified to about an inch in front of the angles, and the new flesh beneath the tongue had become a ligamentous mass, which answered for bone, and to it the muscles became adherent. The child soon became robust, and grew rapidly, with her articulation accurate. The only external trace of the operation was the linear cicatrix of the first incision, and a transverse wrinkle beneath the chin, from the contraction of the integuments.

"About four months afterwards, however, she caught a cold with fever, and soon the right submaxillary, and neighbouring lymphatic glands, became swollen and painful. Under depletion, &c. all speedily subsided, except the submaxillary gland, which continued indurated, while the integuments of the chin became dry and corrugated. The cicatrix under the tongue assumed a yellowish-white colour, and the chin increased in density. In January, there was excessive tumefaction, with external ulcerations. Deep fissures formed in the skin, discovering a dense mass of a cheesy, cartilaginous nature, like the tumour which had been removed. Large sloughs penetrated the cheek, exposing the cavity of the mouth, with intolerable fætor. Emaciation and debility rapidly hurried the little sufferer to the grave. She died on the 22d of March. Little pain or loss of sleep had been experienced.

"On dissection, the heart was found enlarged in substance, and much distended with blood. Two small cartilaginous incrustations on the surface of the ventricles. Pericardium fully distended with reddish serum. About one third of the exterior of the lungs was quite white, the remainder as usual. Some small tubercles, two scrofulous, about the ramifications of the left bronchia. No other viscus diseased but the liver, which was studded over with white spots, of the size of grains of wheat."

#### *Dr. BRILCHER's Case of enlarged Tonsils\*.*

"Catherine Collins, aged 10, presented herself to me in the month of June last, with considerable enlargement of both tonsils, by which deglutition and articulation appeared much impeded, her countenance expressive of much anxiety and distress, respiration affected; she appeared emaciated; for some time back she had been unable to swallow any thing but fluids, and has been fed on broths. On particular inquiry into her case, I ascertained that about two years back she had had simple cynanche tonsillaris, which was then neglected, and has since gradually verged into the chronic state, slowly increasing until I saw her. Nothing decisively

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\* *Medico-Chirurg. Révuc.*

had been done for her. On examination; I found the tumours of a pyriform shape, terminating in apices, the bases apparently involving the substance of the tonsils themselves, occupying nearly the entire space of the half arches of the velum pendulum palati; the uvula hanging undisturbed in the centre; between them a fissure appeared, capable of admitting a crow-quill into the pharynx. Their surface appeared covered with venous ramifications turgid with blood; texture firm and compressible in some parts, indurated in others.

"I determined to try local treatment previous to the proposal of extirpation, as the patient's sufferings were such as loudly to call for decisive interference. I immediately made several deep incisions into their substance, conceiving that the local hæmorrhage would materially contribute to their reduction; purgatives of the saline class were liberally exhibited, and extensive irritation of the cutis produced by frictions of the ung. antim. tart. below the angles of the jaws, and corresponding as near as possible to the internal tumours. The pil. hyd. submuriat. c. was afterwards prescribed as an alterative. This method of treatment was repeated and assiduously persevered in for three months, and it was satisfactory to observe that the tumours were gradually reduced, to the great comfort of the patient, and are now nearly extinct.

"I relate this simple case merely for the purpose of corroborating the good effects of this truly valuable agent (the ung. ant. tart.) when persevered in. In my opinion, we owe much to the late illustrious and lamented Dr. Jenner, who first brought this remedy into practice, and called the attention of the profession to it in his letter to the late Dr. Parry, of Bath. If these methods had failed, I was determined to extirpate the tumours by the ligature in preference to the knife (by the silver wire applied with Levret's double cannula.) My reason for this preference is from witnessing a case of extirpation by a scalpel when I was a surgical pupil. The subsequent hæmorrhage was so profuse that the patient was nearly lost, and nothing but the immediate application of the actual cautery saved his life. The ligature to be sure is tedious, and sometimes productive of irritation; but query? Is it not the safer method of the two? We have great authority certainly for the knife. Desault used both, but he preferred the knife, as also do most modern surgeons; Dupuytren, Lisfranc, and Beclard, at Paris; Sir A. Cooper, and others, in London; Liston, in Edinburgh; and Colles and Carmichael, at Dublin, think of nothing else. I should like to hear the decided opinions of the most experienced on this subject."

*M. CLEVER's Operation of Lithotomy upon himself\*.*—

"M. Clever had suffered from the stone from his infancy, and had undergone the operation five times, and was now enduring, for the sixth time, the torments of this painful malady: he therefore

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\* *Journal Universel.*

determined upon immediately relieving himself; and placing himself before a looking-glass, and raising the scrotum with one hand, he plunged the point of a bistoury perpendicularly into that part where the operation is usually performed; after resting a moment, he prolonged the incision through the integuments, and put his finger into the wound, hoping to feel the stone, but he found the division he had made imperfect; he therefore again had recourse to his bistoury, and completed the section: then, with the assistance at first of one finger, and afterwards of two, he searched for and extracted a stone as big as a large nut. The urine flowed in abundance; he dressed his wound, and slept soundly. The next day, M. Clever informs us, he was as gay as if nothing had happened. Many medical men, and others whom he knew, astonished at the account they heard, went to see him, in order to be assured of the fact; and among the number was Professor Beclard, who examined the stone. M. Clever recovered perfectly. The stone, when examined, appeared to owe its formation to a piece of sponge tent, with which the wound in the former operation had been plugged."

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## VI. PRACTICE OF PHYSIC.

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*Dr. UWINS' Compendium of Theoretical and Practical Medicine.*—The author of this little book is a respectable London practitioner, who formerly Edited the Medical Repository, but of late he has been chiefly known to the public, by furnishing Medical Reports for the old Monthly Magazine. This work is much on the same plan as that of Thomas; but is smaller and cheaper, which to some will be a recommendation, even if it should be less full in information. The directions, so far as they go, present a common place view of modern practice, which may be useful to junior practitioners, or those who are not sufficiently grounded in knowledge. We are sorry that Dr. Uwins has marred the character of his work (*Pref. XI.*) by certain reflections on surgeons and general practitioners, for which he finds it afterwards requisite to apologize in a note. It would have been better to cancel the passage altogether. We think that his arrangement is far from happy in the details. In treating of a disease, for example, he first gives a translation (often incorrect) of Cullen's definitions, then follow an account of symptoms—a history of causes—prognosis—diagnosis, and treatment. Now as he had, in the previous part of the work, taken up fifty pages in giving Cullen's Nosology entire, we think that here it is of no use except to *make up* the book. He also generalizes beyond all precedent, clashing rheumatism, toothache, and gout, all under one head of symptoms and treatment. He

seems to be quite unacquainted with the improvements of the last twenty years.

**Dr. KENNEDY on the Management of Children**\*.—This is one of the numerous books on popular medicine, for which, if we may judge from the late supply, there has been a considerable demand. Dr. Kennedy is a scientific man, and his directions may be trusted; but few of our professional readers who have Hamilton, will find much that is new here, though the subjects are diffusely treated in a rather laboured style of composition; as might be expected from the author's character of an industrious pains-taking man. The author has been very minute on some parts of physiology, such as nutrition, growth, &c.

**Dr. P. M. LATHAM on the Diseases of the General Penitentiary**†.—Our readers are well aware of the interest which has been excited by the diseases induced at the Millbank Penitentiary from diet, &c.; and that real scurvy made its appearance in a formidable manner. This work is a complete history of the circumstances, and is so important, that we shall probably give an extended analysis of it.

**CARMICHAEL on Venereal Diseases**‡.—This is a second edition, but has been so much altered as to make it almost an original work. As it contains many interesting facts and documents by so eminent a practitioner, we shall analyze it for an early Number.

**Dr. SCUDAMORE on the Use of Colchicum in Gout**§.—Our readers must not imagine from the title of this book that it contains any thing new. It is indeed a mere cento of remarks extracted from the author's other publications; and so far from entering minutely upon the colchicum, as we anticipated, there are scarcely fifty pages, widely printed, upon the subject. The remainder of the volume is an abridgement of his doctrines respecting the treatment of gout. Our readers will scarcely believe that the author has not once, that we can discover, alluded to the flowers of colchicum, though it would appear that these are the best medicinal part of the plant.

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\* Instructions to Mothers and Nurses on the Management of Children in Health and Disease, &c. By James Kennedy, M.D. pp. 339. 12mo. Glasgow, 1825.

† An Account of the Disease lately prevalent at the General Penitentiary. By P. Mere Latham, M.D., &c. pp. 287, 8vo. London.

‡ An Essay on Venereal Diseases, and the Uses and Abuses of Mercury in their Treatment; illustrated by Drawings. By R. Carmichael, M.R.I.A., &c. Second edition. pp. 376. 8vo. London.

§ Observations on the Use of the Colchicum Autumnale in the Treatment of Gout; and on the Means of Preventing the Recurrence of that Disorder. By C. Scudamore, M.D., &c. &c. pp. 116. 8vo. London.

**Dr. COOKE on *Belladonna in Cancer* \*.—**

Feb. 13, 1785.—“ In November, 1783, Mr. H—— desired me to visit a woman, aged sixty, who had been troubled with a cancer in the left parotid; ulcerated, stinking, and daily discharging blood. A string of occult cancerous tumours ran from thence to her breast, and even into her breast. I advised half a grain of extract of belladonna (*solani lithiferi*) to be given to her twice daily. She took it for three days, and found her pains easier. Without consulting any one she then took nine pills at once. Immediately, thereafter, she lost her senses, and continued so for about forty-eight hours. The ulcer discharged blood in considerable quantity, and every one thought she would have soon died. I advised Mr. H—— to apply to the ulcer, with a feather, aqua fortis, diluted with eight parts of water. Fourteen days after, I was informed that she was well and cured of all her tumours. I saw her well, and she still continues so. The extract is mixed with four times its weight of wheat flower, and then made into pills.”

**Dr. COATES on *Blood-letting* †.—**The following concise remarks we think worthy of attention:—

“ 1. There must be either a general or local excitement, or a venous congestion, sufficient to produce either injury to the system, or considerable inconvenience and distress. This must be, at least in some measure, dependent on the tone of the arterial system, which may be either increased, natural, or even less than natural.

“ 2. This must exceed the controlling power of low diet, and the ordinary febrifuges, and of frictions, and the other milder means of relief; and the case must require greater promptitude than is compatible with the use of purgatives or digitalis.

“ 3. The importance of the relief to be procured must exceed that of the increase which venesection would produce in the debility subsequent to the termination of the disease. In this debility are included the slight dropsies which sometimes owe their cause to bleeding.

“ 4. The danger, if any exist, of bleeding augmenting a subsequent debility, or a typhous disposition in the progress of the disease, or of incapacitating the patient from bearing subsequent exhausting hardships from the same cause, as in small-pox, must be of inferior consequence to the present occasion for the remedy. This is a consideration totally distinct from the last.

“ 5. The excitement or congestion must be so far capable of being moderated by diminishing the force of the heart, that equal relief cannot be obtained by cups, leeches, or blisters, or not with so little injury to the system.

“ In these principles there will probably be few physicians who

\* We have this interesting notice from our respected Correspondent, Dr. John Hume, of Hamilton.

† Chapman's Philadelphia Journal.

will differ from me. They are, in fact, a mere systematic enumeration of considerations generally acknowledged and acted on.

"In the second place, when bleeding is resolved on, the quantity to be drawn must be regulated by the following principles:—

"1. If it be desirable that a certain degree of excitement should still be kept up, and it be consequently only necessary to moderate it, faintness should, in general, be avoided; and the quantity drawn should be varied according to so many circumstances, that it would be tedious to enumerate them here.

"2. If the object be, without the presence of the last condition, to remove or relieve prominent and dangerous, or distressing local symptoms, bleeding should be continued till some relaxation of the system be produced, as evinced by a slight degree of nausea, by muscular weakness, a swimming of the head, diminution of the warmth and redness of the skin, and, in by far the greater number of cases, by an immediate and considerable relief to the pain or other symptom to be removed.

"3. If the symptom be of great importance—if life itself, the comfort of the remaining portion of it, or intellect, be in danger—and if there be no very serious grounds for fearing a dangerous or destructive prostration of the system, the patient should be bled to absolute fainting; the effect be promoted by an erect posture, if not contra-indicated; and this state preserved for a length of time, proportioned to the degree of the circumstances just enumerated.

"4. If however, from the prevalence of either direct or indirect debility to an alarming extent, this be forbidden, we are reduced to the ordinary rule of endeavouring to calculate the probabilities of benefit in the best manner we are able, and to cut accordingly."

"5. If it be feared, from the constitution of the patient, that fainting will occur from other causes, as it sometimes will, too soon for the removal of a sufficient quantity of blood to produce a permanent effect, and that the symptoms will recur with nearly the same violence—the well known causes which augment this tendency, such as heat, want of air, the erect posture, and alarm, should be removed previously to commencing the operation; and we should sometimes even set the vein bleeding a second time, after the patient has recovered from his state of depression."

Dr. HENRY on Iodine in Gonorrhœa\*.—

"M.—, aged 22, of a strong constitution, came to consult me on the 17th of October last, for a gonorrhœa, which he had perceived about ten days before. The *ardor urinae* was severe, and he had, during the night, very frequent and painful erections. The discharge had diminished in quantity, a few days before he came to me. I ordered the almond milk for a drink, and five leeches to be applied to the urethra. I saw him again on the 19th, the pain and the chordee had been relieved by the leeches, and the running had returned. He continued the same drink, and used the tepid bath.

\* Gazette de Santé.

" 21st. The patient found himself much better; but the running is even increased. Ordered fifteen drops of the tincture of iodine in a decoction of linseed. On the 22d, 23d, 24th, and 25th, I increased the tincture ten drops each day, which he took at divided doses.

" 27th. The discharge is very slight, and of a white colour. At this time he took fifty-five drops daily, which he continued to do until the 1st of November, two days before which time, the discharge had completely ceased. I saw the patient a month after, but he had no return of the discharge.

" L—, aged 33, consulted me in the early part of November, for an inflammation of the mucous membrane of the urethra, which he had laboured under for thirty-six days. He had used without benefit, sudorifics, copaiba, Bellart's pills, and injections of the acetate of lead. He had at this time no pain in making water, but a copious discharge of a greenish-white colour. I made him some injections with *two drachms* of the sulphate of zinc, dissolved in a pint of water, to which was added half an ounce of laudanum. He took, at the same time, pills of cachou, alum, and turpentine. The discharge did not diminish. I increased the quantity of the sulphate of zinc to *half an ounce* to the pint of water, without any benefit. I then left off the injection and the pills, and gave him fifteen drops of the tincture of iodine in a glass of gum water; twenty-five drops the second day; thirty drops the third day, when the discharge began to diminish. The fourth day, he took thirty drops in the morning, and fifteen in the evening. The fifth day, thirty drops in the morning, and twenty-five in the evening. The sixth day, thirty drops in the morning, and the same in the evening. I did not see the patient for four days, and then he came with an increase of the discharge, having indulged in an excess of drinking, and he also complained of ardor-urine. Eight leeches were applied to the track of the canal. On the following day, he took thirty drops of the tincture, morning and evening; the next day he took forty drops night and morning, and the disease completely disappeared."

Dr. J. C. Cress's *Case of Poisoning by Opium*\*.—

" The following case, that occurred in the practice of Dr. John C. Richardson, in June, 1821, gives additional evidence in favour of the practice so successfully pursued by Mr. Wray, Drs. Jones, and Jackson. Had Dr. Richardson published an account of this case shortly after it was treated, he would have secured the credit of having introduced the practice of applying cold affusion in cases of poisoning from opium. The earliest account of Mr. Wray's success is dated in 1822, and Dr. Richardson employed the affusion for this purpose, in the Summer of 1821.

" The patient, under the influence of the gloomiest feelings, retired early to bed, where she swallowed laudanum—though in what quantity, or how soon after reaching her room, is unknown. About

\* Chapman's Philadelphia Journal.

eleven o'clock she was found foaming at the mouth—her breathing deep and embarrassed—and a phial, standing on a chair near the bed, containing a small quantity of laudanum, led to a belief that she had poisoned herself.

"Dr. Richardson, who was immediately sent for, being at the moment very much occupied with other professional engagements, requested me to visit this patient, in company with a gentleman who belonged to his office. When we arrived, she was insensible to stimuli—the pupil did not contract when subjected to strong light—the olfactories were insensible to the most pungent sternutatories—and the skin seemed entirely devoid of sensibility. She foamed copiously at the mouth—her jaws were almost immovably locked—the flexors of the fore-arm were in a state of continual subsultus—the skin was cooler than in the healthy state, and covered with a cold clammy sweat.

"After some efforts, we succeeded in opening her jaws, and administered large doses of ipecacuanha, tartar emetic, and sulphate of zinc, which only produced a disturbance of the stomach, amounting to slight retching. In vain we endeavoured to awaken the system by universal agitation of the body—vinegar was given, notwithstanding Orfila's unfavourable account of it, and although no positive advantage resulted, we were sure that no evil was produced, as Orfila had taught us to expect.

"Many other fruitless efforts having been made, we attempted to employ a substitute for Renault's stomach tube, so successfully restored to practice by Dr. Physick, as we could not obtain the proper instrument. For this purpose, the end of the largest sized male catheter was adapted to a syringe, and passed into the stomach—but the size of the instrument was too small, and it was immediately choked by the mucus of the stomach, and became ineffectual.

"Dr. Richardson was again sent for. On his arrival, learning how unprofitable our efforts had been, he resorted at once to the application of cold affusions. The patient was supported upright in a chair, and large buckets of cold water were poured over her head, and flowed profusely over the rest of her body. This prompt and decisive practice was not so immediately followed by signs of returning sensibility, as in the case recorded by Dr. Jackson. The treatment was persevered in, and the affusions increased in quantity during forty minutes. A return of sensibility now became manifest, and at the end of the next hour, she was so far recovered as to be able to articulate distinctly, and complained of a great degree of sleepiness. She was kept awake by forced exercise—an enema made of a solution of common salt was administered—the bowels acted—a blister was applied over the sternum, and another on the ankles. In the morning she was quite recovered, and able to resume her ordinary avocations.

"We were lately called," says Dr. Chapman, "to a child of four months old, to whom had been given a tea-spoonful of laudanum for the tincture of rhubarb. The mistake was discovered more than an



hour afterwards, by the stertorous respiration, and heavy stupor which took place. Before our arrival, ten drops of antimonial wine had been given, and the child immersed in warm water, by which moderate vomiting was excited, and with it every unpleasant symptom disappeared. We lay this case before our readers with this single remark, that there could be no doubt that laudanum had been given, as we examined the contents of the phial from which the dose was taken."

*M. MEPLAIN's Case of Convulsions treated by injecting Tartar Emetic into the veins \*.—*

"Dr. Meplain, of Doujon, in the department of the Allier, was called upon to visit a girl, twenty-two years of age, of a lymphatic temperament, short and fat, who had suffered from her infancy from attacks of worms, but was in other respects healthy. For upwards of a fortnight previously, her appetite had been voracious—yet, notwithstanding, she was always hungry, the sight and smell of food disgusted her, and she really ate but little; her nights were disturbed by frightful dreams—in the morning she complained that her mouth was full of a mawkish saliva—she had frequent inclination to vomit. At the termination of a journey, in which she had suffered a great deal from cold and damp, she was seized in the evening with a violent attack of fever, with intense headache and eructations, wandering pains in the limbs, and great restlessness. The night passed badly, with violent cramps in the legs, low delirium, and grinding of the teeth. The next day, hysterical symptoms, frequent efforts to vomit, convulsions, and continued agitation. In the night the patient lost all consciousness—the limbs became stiff. Dr. Meplain found his patient, on the 15th instant, in the following condition:—She was lying on her back in a state of complete immobility—the eye-lids raised, the eyes fixed, and the pupils contracted—the head completely bent backwards—the jaws forcibly held together, so that they could not be opened by any efforts—the limbs in a state of tetanic rigidity—pulse scarcely perceptible—the skin cold—abdomen soft—and the urine (last passed on the preceding day,) white and milky. Dr. Meplain, from all the previous circumstances, conceived these symptoms to be produced by the presence of worms—being taught, he says, by numerous dissections, that, in these cases, the coming on of convulsive symptoms indicates that the worms have passed into the stomach, and seek an exit by the œsophagus. He therefore attempted, by various means, which we need not detail, for the space of six hours, to bring on the action of vomiting—but without success. He then determined, considering the very critical state of the patient, to attempt the injection of an emetic into the veins. Dr. M. therefore laid bare the median vein of the left arm, which having separated from the cellular tissue, and having passed a ligature under

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\* Journ. Complémentaire.

neath, (interposing a piece of pasteboard between it and the vein,) and drawing it out to the level of the integuments, he pushed the blood contained above the ligature upwards with his fore-finger, and then made a longitudinal incision of four or five lines in the vein, into the cavity of which he placed the canula of an ordinary trocar—this being done, he injected, by means of a hydrocele syringe, six ounces of whey, in which were dissolved four grains of tartar emetic. When this quantity was taken into the vein, the ligature was cut, the vein suffered to fall into its situation at the bottom of the wound, which was brought together and bound up, as is usual after a common bleeding.

The patient gave no sign of sensibility during the operation, which was finished at eleven minutes after two—at twenty-eight minutes after two, the eyes and the lower lip began to move. These details are continued, but at too great a length to permit us to follow them verbatim: suffice it to say, that at forty-two minutes past two, vomiting took place, and eight lumbrici, rolled up in a ball, were ejected—they were all living. The amendment of the condition of the patient was striking: the rigidity of the limbs had ceased—she could swallow, but could not speak—the pulse was stronger, but intermitted, and she appeared to be fainting. At fifty-six minutes after two, she vomited again two lumbrici of a larger size—after which she began to articulate, complaining of a sense of heat in her chest, of a violent headache, and of a sense of uneasiness which she could not describe. From that moment the condition of the patient presented nothing remarkable. She vomited several times afterwards, bringing up, together with a prodigious quantity of bile, five more lumbrici. For three days after the patient suffered much general disturbance of the system, headache, thirst, &c., but the menses appeared on the 18th, and on the 20th he was quite recovered."

## VII. MIDWIFERY.

### Dr. Hosack on *Ergot in Uterine Hæmorrhage*\*.—

"Dr. Hosack is inclined to proscribe the ergot altogether, in cases of difficult parturition, preferring the forceps; he conceives that, from the active operation of this medicine on the womb, it promises to be very extensively useful in counteracting many morbid conditions to which that viscus is liable, especially those proceeding from an inactivity in its muscular powers, or lax state of its vessels, as in retention of the placenta—excessive discharges of the lochia—fluor albus—uterine hæmorrhage. An instructive case of this last is here related, and as it is very short, we will give it in the author's own words:—

"Mrs. L——, a lady about fifty years of age, of a plethoric but

relaxed habit of body, ceased to menstruate about four years ago. Since that time she has evinced the ordinary symptoms of fulness of the blood-vessels, that frequently supervene upon the cessation of that function; viz. a sense of distention and pain in the region of the uterus; a fulness of the breasts; oppression of the chest; frequent headache and giddiness. By blood-letting these have been several times removed: but neglecting this remedy when those feelings returned, uterine hæmorrhage was the result, followed by great loss of strength. In this debilitated state, in which further depletion was forbidden, I had recourse to the various vegetable and mineral astringents, administered internally and externally, but without effect; cold also was applied to no purpose.—In this lax state of the uterine vessels, I directed ten grains of the ergot to be given in substance three times a day. In a few minutes after the exhibition of each dose, it was followed by the uterine nîsus, which immediately stanchèd the discharge. In a few days, by suitable nourishment, and the continuance of the tonics which she had before employed without the effect of restraining her discharges, she recovered her strength.

“In the course of the last month, she experienced some return of the hæmorrhage; but, by a few doses of the ergot, the discharge was as immediately restrained as it had been in the first attack.”

*Citric Acid in Uterine Hæmorrhage.*—“M. Gorat, at the last annual sitting of the Royal Academy of Medicine, read a curious paper on the employment of citric acid in hæmorrhage occurring after delivery.

“This practitioner very properly recommends the surgeon not to leave the patient within an hour after delivery, as it is within that time, ordinarily, that hæmorrhage occurs. When this happens, the following is the mode M. Gorat adopts: he strips a lemon of its skin, and having cut off one end of it, he carries it into the cavity of the uterus, and then expresses the juice on the sides of that cavity. He allows the decorticated lemon to remain there until, by the irritation produced by the juice and this foreign body, the uterus is excited to fresh contractions, which, constringing the tissue of that organ, stops the hæmorrhage, and the lemon is expelled with the coagulum formed about it.”

*SCARPA on Pregnancy complicated with Ascites* \*.—Our readers will all recollect Scarpa's very interesting case of pregnancy, complicated with dropsy, published in the first Vol. of the Old Series of this Journal. Since, also, we have taken notice of the interesting case by Mr. Langstaff, published in the Medico-Chirurgical Transactions. The venerable author has, in the paper before us, collected several other important cases of a similar kind, which we shall now relate. The first case in the Memoir—

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\* *Mélange de Chirurgie Étrangère, &c. Vol. I. Genève, 1824.*

is the one which we have already published, and we shall therefore begin with the second, which is by Dr. Cruch, of Pavia.

"Mary Gregnani, aged twenty-nine, was received into the Hospital of Pavia on the 30th April, 1820, being then about five months gone with child, and evidently labouring, at the same time, under ascites. She had had a protracted intermittent fever previously, which gave way to the use of the bark, soon after which the ascites appeared, and increased so much as to greatly incommode her breathing. She could now rest better lying on her face than in any other position. Diuretics, drastic purges, and venesection, were tried, but without affording any relief. By the latter end of August the accumulation of water threatened suffocation, and as the patient appeared to be in a condition similar to that of Scarpa's, our author determined on paracentesis abdominis, in the left hypochondriac region, as Scarpa had directed. The operation was performed on the 7th September, in presence of M. Parizze, Professor of Anatomy. Twenty-five pints of water were drawn off, having a slight greenish tinge. Great relief was immediately felt by the patient. Although the quantity of water left in the abdomen was very trifling, yet it very quickly re-accumulated, and in twenty-four hours the abdomen was again considerably distended. In the night of the 9th the wound opened, and a good deal of water escaped spontaneously. In the night of the 10th labour came on, and Gregnani was delivered of a living child. The labour pains then ceased, and the placenta was not expelled. Flooding succeeded, and went on to a great extent before any attempt was made to extract the after-birth. When the attempt was made, it failed, in consequence of a partial adhesion of the placenta to the uterus, which the surgeon was afraid to separate, lest he should injure the uterus. The poor woman died of internal hæmorrhage in the mean time.

"Dissection.—Eight pints of water in the peritoneal cavity—no appearance of phlogosis in the peritoneum or other part of the abdomen. The uterus was as large as in the sixth month of pregnancy. On its internal surface the placenta adhered for the space of about three inches. In attempting to separate this adhesion, it is said that lacerations of the internal parietes of the uterus took place. M. Peschier, the translator of the Memoir, remarks, that he has very frequently checked uterine hæmorrhage, by exhibiting the extract of rhatany, in doses of one drachm every hour."

The next case is also by Dr. Cruch.

"M. L. Mandilini, thirty-one years of age, of plethoric habit, had, like the preceding patient, been long harrassed with intermittent fever, accompanied by distressing irritability of the stomach, and followed ultimately by icterus and enlargement of the liver. From these, however, she was recovered pretty well. She became pregnant, and was delivered of a dead child. In October, 1819, she was attacked with discharge of blood from the uterus, which was repressed

by cold applications and astringents. In November of the same year she was threatened with hæmoptysis, which was averted by bleeding, digitalis, and nitre. In June, 1820, Mandilini became pregnant a second time, the utero-gestation going on regularly till the sixth month, except that the patient could not lie on the left side. Towards the end of October she complained of frequent pains in the lower belly, with desire to make water, cough, and difficulty of breathing. The abdomen was now observed to be much larger than in ordinary states of pregnancy, six months advanced, and, in fact, ascites was clearly ascertained to exist, though to no great extent. 2d November. The abdomen was now excessively distended and almost livid—the breathing very difficult—the lower extremities greatly swelled. Paracentesis (in the same place as before) was performed, and thirty pints of limpid and inodorous water were drawn off, with great relief to the patient. Still the uterus appeared much larger than natural at such a period of pregnancy. Two hours after the operation, slight uterine pains came on, during the continuance of which, about six pints of watery fluid came away *per vaginam*. After this, blood was discharged, partly coagulated, partly fluid, followed by much faintness, from which, however, she soon recovered. On the 9th November real labour pains set in—the membranes presented themselves in a bag—and in four hours two still-born children were expelled, in size corresponding with six months utero-gestation. The after-birth followed, without any assistance. From this time the patient recovered well, and had no return of the dropsy."

The next case is by M. C. Maunoir.

"Madame V——, pregnant four months and a half, applied to our author on the 11th January, 1819, complaining of acute pains in her stomach—inexpressible anguish in the chest, augmented by the slightest mental agitation—tightness in breathing. The pulse was small—the abdomen larger than it ought to be at that period of pregnancy—face pale—eye-lids swelled. Diuretics—fomentations to the abdomen. 18th January. Swellings about the spine, chest, and parts of generation—dyspnœa very troublesome—pulse small and hard—urine scanty and high-coloured. Venesection. The breathing became freer after bleeding, yet the swelling gained ground, especially about the groins and labia pudendi. Scarifications gave vent to much discharge, and produced great relief. 27th. When visited, the patient expressed great anxiety, but no actual pain to announce an approaching labour. In the course of three hours, however, labour pains set in, and the accouchement was speedily over. The fœtus was in a state of putrefaction—the placenta followed. There was no discharge, either of blood or water. The abdomen was still dropsical, and the fluctuation evident. Diuretics and purgatives were administered. On the third day a diarrhœa supervened, and the urine began to flow in abundance. The anasarca diminished. In twelve days after the accouchement,

no fluctuation was perceptible in the abdomen. Afterwards tonics were administered, and the patient got quite well."

"On the 20th April, 1804, M. Maunoir was called to perform the operation of paracentesis on a woman residing in the country. She informed him she was pregnant, as she had not menstruated for some time. On examination, however, M. Maunoir came to the conclusion that she was *not* pregnant. Fluctuation was very evident in the abdomen; and engorgement of the liver was suspected. Paracentesis was performed on the left side, and twenty-five pints of water were drawn off, limpid but viscous. Diuretics were ordered, and the woman was soon about her domestic concerns. The abdominal effusion, however, returned, accompanied by inclination to vomit—frequent desire to urinate, but the discharge scanty in proportion to what she drank. In two months the abdomen was so enlarged that it was necessary to tap her again, when nearly the same quantity was drawn off. She still insisted that she was pregnant, but examination belied the idea. In a month, the operation was again performed. At this time our author lost sight of the patient; and did not see her till the beginning of January 1805. A surgeon in the neighbourhood had attempted to draw off the water from the abdomen several times in the interval, but had only succeeded once. At this period the woman was found to be actually pregnant, having become so about the middle or end of October 1804. She was now much emaciated, but had no vomitings. Paracentesis for the fifth time (not counting the unsuccessful attempts) and milk diet recommended, with diuretics of digitalis and cream of tartar. But the accumulation of water was very quick, and she was obliged to be tapped, often at intervals of three weeks. On the 27th June, after a quantity of water had been drawn off, a tumour above the pubis was very perceptible. On the 15th July she was delivered of a living child, the abdomen still preserving a great size. A diarrhoea, which could not be restrained, now came on, and reduced the patient to the lowest ebb. At this time, an erysipelatous inflammation appeared on the parietes of the abdomen, and threatened gangrene, but death put an end to her sufferings eight days after parturition. On dissection, there was an ovarian dropsy as well as ascites and anasarca."

The following are additional cases which have been published in this country\*, the first two by Mr. Hickes of Bath, the other by Sir L. M'Lean.

"Two cases of peculiar delicacy," says Mr. Hickes, "incidentally required my exertion in capacity of accoucheur, although, for several years, the extent of my professional avocations has precluded my retention of that branch of practice. About two years since, a case of *ascites*, concurrent with pregnancy, was submitted to my care, subsequently to denial of pregnancy by one of the most emi-

\* See Medico-Chirurg. Rev. No. 3. p. 265.

nent in the profession. Reluctant, through subduction of the *liquor amnii*, to destroy the fœtus, I ventured, on my own responsibility, even unencouraged by precedent, consultation, or recorded authority, to originate an operation for *ascites*, on a pregnant patient. I was, in the first instance, influenced by consideration of the ordinary transmission of blood, through the *placenta* to the *uterus*, being unavoidably checked, on the exterior layer of its muscles, with their integuments, being brought into contact with the *parietes* of the *uterus*, through loss of the *liquor amnii*. In the next place, the *diagnosis* of impregnation being, to my perception, indisputable, I was solicitous to relieve tension of the abdomen, by exhausting the redundant lymph in the abdominal absorbents. Through such operation, I therefore anticipated a triple effect;—immediate alleviation of the patient's extreme suffering—facilitation of approaching parturition—with preservation of life both to parent and offspring. It was an experiment—if hold, by no means adventurous, and it terminated in the gratifying result of complete eventual success.

"In corroboration of the preceding statement, I feel it due, not less to professional character, than to excitement of similar operation in parallel cases, to refer the reader, desirous of ulterior proof, to a letter from my patient, dated January 17th, 1823, in consideration of its author's rank, with greater propriety lodged in your possession for inspection of the scientific, than subjected to indiscriminate publicity. Similar treatment of a subsequent case has likewise occurred in my practice.

"A lady of Cornwall, returning from Italy, became decrepit during the second month succeeding to cessation of menstruation. Internal abscesses were developed, through emission of purulent matter from the anus. The consequent debility was excessive. Indeed, the general symptoms presented to the surgeon of that packet, indication of approaching termination of life. In such deplorable state, during the fourth month of unsuspected pregnancy, she placed herself under my direction. Indication of *ascites* in an early stage was decisive—the symptomatic affections were, frequent recurrence of spasm—oppressive respiration in a horizontal posture—with the ordinarily attendant complaints. In the lapse of three or four weeks, the fœtus, acquiring competent dimension, detected its head to the usual test, application of the hand. In contemplation of such incontrovertible prognosis, the impression of improbability of conception supervening, subsequently to eight or nine years of infecundity, could not be eradicated from the patient's apprehension. It should be stated that, from the period of impregnation, conjugal intercourse fortuitously terminated. Necessity of early operation, as in the preceding case, was by no means indicated. Repletion of the abdominal absorbents advanced with inferior progress. Tension on the lungs was felt with less degree of inconvenience. The symptoms in general, certainly unambiguous, were yet unattended with equal oppressiveness. The object of pa-

*paracentesis* being principally to facilitate parturition, although, in part of course, to remove specific disease, the operation was postponed to a week or ten days previous to commencement of labour pains. On delivery, the child appeared full grown, perfect, and of the male sex; but through some undiscoverable cause of excitement, probably adventitious, and unconnected with influence of *ascites*, the umbilical cord, having surrounded the neck, had produced the usual result, strangulation. Operation of some foreign incidental cause was equally suggested by an additional indication—adhesion of the *placenta* to the *parietes* of the *uterus*. The flooding becoming excessive, constrained extraction, through introduction of the hand, became indispensable as an exclusive expedient. Notwithstanding the minutest caution observed in removal of the adherent portions of *placenta*, the consequent inflammation of the uterus required exhibition of refrigerant and antiphlogistic treatment. It was preceded by bleeding, as well through venesection, as through local application of leeches. In the course of three or four months, asthenic symptoms disappearing, the cure of this delicate case attained its consummation.

“In a patient presenting such remarkably asthenic symptoms, had not parturition been preceded by *paracentesis*, its pains might have been rendered too excruciating, its duration too prolonged, to be encountered without hazard of life.

“One observation remains, equally applicable to both cases: In neither, has the most distant indication of recurrent *ascites* been detected. In the first instance, two years, in the second, several months have elapsed without alarm; consequently, *paracentesis* was not merely warranted, by production of instantaneous relief from pain, but was absolutely necessary for attainment of radical recovery.—Delay of the operation to any given period, subsequent to parturition, while it inevitably would have augmented the patient's suffering pending labour, would probably have permitted the morbid torpor of the abdominal absorbents to extend beyond possibility of re-invigoration. In such event, irrecoverable loss of tone necessarily supervening—the patient's life could not fail to have fallen a sacrifice to timid procrastination.

“June 13th, 1791, Mrs. C—, aged 34, was found by Sir L. M'Lean with confirmed *ascites*, unaccompanied by *anasarca*. She was emaciated, but not proportionally debilitated. The origin of the dropsical affection was dated two years back, since which the *catamenia* had been irregular. Various remedies had been used, and she had been tapped three times—the last only four days prior to the above date. Sir L. ascribed the dropsy to disease of the right ovary. On his next visit, (9th August) it was suspected (by the patient) that pregnancy also existed. She was, however, tapped at this time, and towards the middle of August, pregnancy was proved by the occurrence of quickening. On the 25th September, *paracentesis* was again necessary, taking care to avoid injuring the uterus. No untoward circumstance occurred during or subsequent



to the operation. By November the 9th, the lady was labouring under great distress, from distention of the abdominal integuments. The operation again performed. December 30th, paracentesis was performed, which the lady bore with great fortitude and good spirits. During the latter months of pregnancy, she became extremely heavy and unwieldy, especially before the two last tappings. She was safely delivered of a strong full-grown boy on the 24th January, 1792, the labour having been quick and easy. In eleven days after delivery, paracentesis was again performed. After this, until a sudden change which caused her death, her general health appeared rather to improve. The cause of death was a collection of matter in one of the ovaria, which burst. Sir L. observes, that this is the first case which he has met with on record, where the mother and child survived the delivery."

*Respectability of Practitioners of Midwifery.*—It may be recollected, that a Society entitled the Society of Physicians of the United Kingdom, a short time ago, published as one of their standing rules:—"That no person be a member of this Society who is engaged in the actual practice of Surgery, Pharmacy, or Midwifery." A commentary on this law, so far as relates to Midwifery, has been published in the Medical Repository, and is of so extraordinary a kind as to deserve some notice. The Editor, indeed, has found that it was too gross to be passed over, and has been obliged to come forward with an apology for himself, regretting the publication, and disclaiming some of the principles, though it is evident, that so long as he acknowledges himself a member of the above named Society, and agrees to the law we have just quoted, that he must acquiesce in the general principle that the actual practice of Midwifery is degrading to the medical character. The following is an extract from this contemptible Repositorian attack on a very numerous, useful, and respectable body of practitioners, including, as will be remarked—Surgeons—that is, the *manual mechanics of the profession* :—

"The study of *physic* strictly so called, that is, as it falls within the province of the physician, is in a manner an abstract science it has nothing manual or mechanical necessarily pertaining to it. Applied to practice, it may call, indeed, for manual aid ; but as science it is altogether independent of this. *Surgery*, on the other hand, as distinct from *physic*, is, both in its nature and denomination, *manual and mechanical*. Whatever it has of science belonging to it is derived from *physic* properly so called : it is merely the means of carrying the science of the physician into effect. The practising surgeon, in as far as his art is directed by science, is in reality a physician ; he thus combines in himself *surgery* and *physic*, and performs a double function. This, however, is not favourable to the attainment of perfection in either : and I believe it will be

found that those who have most excelled in manual dexterity, have not, in general, been those whose judgment in pathology has been in the highest esteem : or, to express the thing in a more practical way, the man I would choose to perform an operation of difficulty and danger, is not the one I should be desirous of consulting with regard to the necessity or propriety of having recourse to it.

"The present question, however, is, to which branch of medicine, *physic* or *surgery*, does the art of *midwifery* belong ? or does it belong to either ? one would imagine not, since it appears to be disavowed by both. Surgeons, who aim at eminence in the higher walks of their art, hold it in contempt. The pharmaceutical branch, as a body, disclaim it. The College of Physicians refuse their sanction to it, and hold no communion with those that practise it. No public provision, in this country, is made for teaching it ; nor is any test of ability required from those that practise it, by either college or corporation. Its very name has become opprobrious ; and men, while they practise it, seem ashamed to avow it, and cover their art by a term of foreign growth. We now seldom hear of *men-midwives* ; all are *accoucheurs*. Were it not, in fact, for the emolument derived from the practice of it, it would be no longer heard of among educated men. But it is liable to still more weighty objections and those of a moral description. Much of its importance is founded in deception ; and in a misapprehension of its real nature, by those about whom it is employed. The public are led to believe that the safety of women in child-birth would be compromised, were they entrusted to female practitioners alone. This fear operates upon the minds of husbands and other relatives, not less than upon that of the sufferer herself, to the sacrifice of all female delicacy. But who is there, at all acquainted with the subject, that really believes that well-instructed females are not fully equal to the ordinary practice of midwifery ? or that in ninety-nine cases of a hundred, art does any thing of importance, or has, in fact, any thing to do, that might not be as well or better done by an intelligent female ? If the *hundredth* case forms an exception, it is merely such, and does not require to be provided for by the general rule of throwing the whole of the practice into the hands of men, not one in twenty of whom is in reality competent to a case of real difficulty when it does occur. Provision, doubtless, should be made for such extreme cases : but then any surgeon of sufficient education and practice, previously acquainted, as he must be, with general principles, would be competent to administer the required aid. This is, in truth, the view of the subject that is generally taken on the Continent ; and was so in this country, till within the period of half a century, before which, midwifery, as a distinct branch of medicine, was not heard of. The late Queen Charlotte was assisted by a female in all her numerous child-births. It is true, a male practitioner was at hand, in case of unexpected difficulty, but as a matter of precaution only ; nor did he approach her person. Had the example been adhered to on a subsequent

occasion, we might not have had to deplore an event with which the whole nation painfully sympathised at the time. To sum up all, it is an art involved in mystery. It practises in the dark. *Its operations are all disgusting and demoralising; an art, in short, that is hardly fit to be named in decent society.* Yet such is the branch of art which well-educated physicians now and then *descend* to practise; tempted, one may well believe, by filthy lucrè alone, which they are content to share with the lowest and most ignorant of the Profession. How possibly, or with any regard to consistency, can a society, the aim and declared intention of which is to maintain the respectability and dignity of physic, recognise a branch of art that is supported on such a foundation, and which is disclaimed by the higher classes both of surgeons and apothecaries? It is nothing to say that it is actually practised by many individuals of high attainments in general science, and who have been educated in a regular way. This does not *lessen the disgrace of the thing itself.* We say that it ought to be discountenanced *as low in itself, and an imposition upon the public.* The Society, therefore, have performed a paramount duty, in disclaiming all connexion with midwifery allied to physic; while I have no hesitation in saying, that its adoption by physicians, however respectable in their individual characters, has done *more to degrade this branch of physic, than any other circumstance that could be mentioned ! ! !*"

The author of this most disgraceful paper, we have no doubt, is either a member of the Society, or wrote it as an inaugural Thesis, to ensure his election. Narrowness of mind, and the spirit of exclusion, are always sworn associates.

#### VIII. MEDICAL JURISPRUDENCE.

**M. ORFILA'S Case of Poisoning by Arsenic.**—At the sitting of the Royal Academy of Medicine, a case of poisoning by arsenic was read by M. Orfila.—“A woman, named Laurent, was accused of having poisoned her husband ten days after their marriage. The physicians and officers of health, who had opened the body, had decided that Laurent, the husband, had been poisoned by the white oxyde of arsenic. Two physicians, and an apothecary, not satisfied with the experiments made by the other persons, received authority from the magistrates to dis-inter the body, and they were equally certain that the man had swallowed no arsenic. On account of these conflicting testimonies, it was deemed necessary to submit the suspected matters to the examination of MM. Vauquelin, Barreul, and Orfila, persons celebrated for their chemical knowledge, and they came to the conclusion, that there was no arsenic to be found in the suspected fluids. The following questions were put to Professor Orfila,

among others, and as they had not been before mentioned, it may be of use to make them known :—

"1. Do the experiments made by the first reporters prove, that the matter extracted from the stomach of Laurent was the white Oxyde of arsenic ?

"A. The physicians who opened the body say, that they found in the stomach a *pulverulent matter*, which being placed on live coals *detonnated, burnt with flame, and gave out an odour of garlic*; and they did not hesitate to conclude that this substance was the white oxyde of arsenic. This conclusion is erroneous, because the arsenic does not detonnate, nor burn with a flame when placed on live coals. Now, although arsenic does give out the odour of garlic, when exposed to a strong heat, yet there are other things which do the same; and it is probable that some matters, decomposed in the stomach during the process of digestion, may afford the same smell. The granular substance spoken of, should have been dissolved in boiling water, and then it should have been tried whether a *green precipitate* would have been thrown down by the *sulphate of ammoniacal copper*, and a *yellow precipitate* by the *hydro-sulphuric acid* which should be again rapidly soluble in ammonia.

"2. Is it possible to find, in the alimentary canal of an individual, not poisoned by arsenic, grains having the appearance of that poison ?

"A. The stomach of Laurent might contain a granulous matter, differing from the oxyde, yet possessing the properties assigned to it by the first reporters, and which they said was arsenic. It is observed, under certain circumstances, that the mucous membrane of the stomach and intestines, is studded with a multitude of brilliant points, composed of grease and albumen; and those grains, placed on hot coals, will crackle and dry up, and such crackling, an inexperienced person might call detonnation. Many cases have occurred in which those greasy or albuminous points or grains have been mistaken for arsenic. M. Orfila then related three cases in which such mistakes had occurred.

"3. Can it be inferred from a fowl having died, which had eaten barley soaked in the suspected fluid, that the barley was poisoned ?

"A. Laurent having died five days after having eaten the *omelette* suspected to contain arsenic, took, in the interim, many drinks which were prepared and given to him by his wife. One of the physicians who attended the patient, struck with the disagreeable taste of some barley water which he was about to drink, cried out, "Ah! that is very tart—ah! that is bad." A hen which had swallowed the barley from which the drink was made, died the next day; and a cat, which had eaten the intestines of the hen, was seized with violent convulsions. It was necessary to determine how far these circumstances tended to prove that the barley was impregnated with arsenic or any other poison. M. Orfila made some experiments on this point, and reasons on them thus :—If arsenic was put

into the water, and boiled with barley, it would remain dissolved in the fluid, and the grain be consequently impregnated with the poison, but if the arsenic was put into the *tisane*, or drink, after it had been made, and whilst only warm, it would not be dissolved, but would be found only incrusting the barley.

"4. Of the leeches which were applied to the epigastric region of the patient, two died immediately after, and the other the next day. Can any induction be drawn from such a circumstance?

We all know what answer any man in his senses would give to that from daily observation, yet M. Orfila took the trouble to poison a dog, and apply leeches to his chest, which leeches lived four days after their application.

"5. Are the symptoms which were observed during the continuance of the disorder of Laurent, and the post mortem appearances, announced in the proces-verbal, of such a nature as to induce you to believe that the death of this person was the result of poisoning?

"A. Certainly the symptoms which Laurent presented, were like those produced by the swallowing of arsenic, but they are common also to a host of other affections. But as to the morbid appearances, what inferences could be drawn from them? The body was spotted over with blue, livid, and leaden patches, and proofs of inflammation were found in all the abdominal viscera, quite sufficient to account for the man's death."

This case shows the danger of deciding upon such an important point hastily; but for the proper interference of the two physicians, the widow must have been executed. It may also serve as a caution to magistrates, not to trust the analysis of fluids found in the bodies of persons suspected to be poisoned, to men who are not well versed in chemical experiments.

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## IX. MATERIA MEDICA AND CHEMISTRY:

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PARIS'S *Pharmacologia*.—We have to repeat the complaint which we made to the former edition of this work, respecting the augmentation of the price, which, it is curious to remark, is precisely 5s. additional for every edition; the first having been 5s., and the sixth, which is now before us, 30s. Dr. Paris makes an apology for this, and talks of the additional matter; but it would have been an easy matter to have compressed the printing, for example, of the formulæ, to make room for the additions. We admit that the additions are numerous and important; but when we get four times the quantity of matter for the money, as in Cooper's Dictionary, and twice the quantity of matter, for little more than the half, as in Beck's Medical Jurisprudence, we think it hard that we should have to give 30s. for about 50 or 100 additional pages of a new edition of the *Pharmacologia*—excellent as we allow these to be—accompanied

with a machine, called a Dynameter, which is ingenious, doubtless, but of little practical utility. We may remark of this edition, that every late discovery of the smallest importance has been introduced into it.

BRANDE'S *Manual of Pharmacy* \*.—This is a work somewhat on the plan of the second volume of Dr. Paris's *Pharmacologia*, but not quite so minute and systematic. It is to Paris, indeed, exactly what Graves' *Conspectus* is to the *Conspectus* of Thomson, or as Cox's *Dispensatory* to that of Thomson or Duncan. This will lead our Readers to a fair estimate of Mr. Brande's publication, which is accurate and scientific, so far as it goes, but deficient in minute detail. A great number of the facts are either expressly taken from, or exactly coincide with, those in the *Pharmacologia*, and the two principal *Dispensatories*. Except as being a little cheaper, therefore, we cannot see that Mr. Brande's *Manual* was much called for. We think that it is too expensively got up: we would rather have had what has been uselessly expended on elegance, laid out on procuring a greater variety of useful details. We shall probably give an analysis of the work in our next.

PARIS'S *Medical Chemistry* †.—As this appears to be a very useful work, and one which was much wanted, we shall analyze it for our next Number.

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#### NEW FRENCH MEDICINES.

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We continue from our last, the interesting extract which we had begun, of the new French Medicines, from the *Conspectus of Prescriptions*, a small pocket volume, uniform with Thomson's *Conspectus*, just published.

##### CROTUM TIGLIUM.

The oil from the seeds of this plant is not so much a new remedy as an old one, again brought into fashion as a powerful purgative. In some cases, a drop applied on the tongue has produced many loose, watery, stools, and one or two drops has sometimes brought on alarming hypercatharsis. Dr. Nimmo, of Glasgow, makes a solution of the oil in alcohol, and exhibits it in the following form.

##### HAUSTUS OLEI CROTONIS.

*R.* Alcoholis crotonis, 3ss.  
Syrupi simplicis.

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\* A *Manual of Pharmacy*. By W. J. Brande, F.R.S. &c. pp. 556. 8vo. London, 1825.

† *The Elements of Medical Chemistry*, &c. By J. A. Paris, M.D. F.R.S. &c. pp. 536. 8vo. London, 1825.

Mucilaginis gum. acaciæ ā ā ʒij.

Aquæ distillatæ ʒss.

Misce fiat haustus cum lacte sumendus.

In *Delirium Tremens*, *Corpulence*, &c

NINMO.

PILULÆ OLEI CROTONIS.

R. Olei crotonis gutt. vj.

Micæ panis, q. s.

Fiant pilulæ No. xij. una vel tres pro dose.

The pill is not a good form of the medicine, as it is too apt to concentrate in one place in the stomach.

MISTURA OLEI CROTONIS.

R. Olei crotonis gutt. ij.

Mucilaginis tragacanthæ ʒj.

Sacchari albi q. s.

Tere in mortario, et fiat mistura.

In *Constipation*.

SMITH.

VEL.

R. Solutionis alcoholicæ olei crotonis ʒss.

Syrupi simplicis.

Mucilaginis gum. acaciæ, ā ā ʒiij.

Misce.

CONWELL.

Croton oil is also used as an external application in rheumatism and, according to Conwell, a few drops rubbed upon the umbilicus will prove purgative.

DATURINE.

A new principle found by Brandes, in the *Datura Stramonium* and possessing its active properties ; but our knowledge of it is still imperfect.

DELPHININE.

A new principle found by MM. Feneulle and Lassaigne, in *Delphinium Staphisagria*, or *Stavesacre*. It is white, inodorous, very bitter and acrid. Six grains proved fatal to a dog according to Orfila ; but little more is known of it.

DIGITALINE.

An alkaline substance found by M. Le Rayer, in the leaves of the *Digitalis Purpurea*. It is inodorous, very bitter, very deliquescent and very soluble in water, alcohol, and ether. It is the active principle of digitalis, and strongly poisonous.

EMETINE.

A new principle found by MM. Pelletier and Magendie, in the several species of *ipecacuanha*. It is bitter, inodorous, and without the nauseous taste of *ipecacuanha*. The dose is from a quarter of a grain to four grains or more, according to the constitution of the patient.

SYRUPUS EMETINÆ.

R. Syrupi simplicis, ℞j.

Emetinæ coloratæ gr. xvj.

Misce ; uncia dimidia vel uncia una pro dose.

Employed as the Syrup of *Ipecacuanha*.

MAGENDIE.

## TROCHISCI EMETINÆ PURÆ.

**R.** Sacchari albi ℥iv.  
Emetinæ puræ gr. viij.

M. F. Trochisci, ā ā, gr. ix.

A grain of pure emetine may be given in a draught to produce vomiting; but as it is little soluble in water, it may be dissolved in sulphuric or acetic acid.

MAGENDIE.

## HAUSTUS EMETICUS.

**R.** Infusi florum tilia ℥iij.

Emetinæ puræ (solutæ in acidum nitricum) gr. j.

Syrupi althææ ℥j.

Sum. cochl. modicum omne quart. hor. donec vomitand. productus sit.

MAGENDIE.

## SYRUPUS EMETINÆ PURÆ.

**R.** Syrupi simplicis ℥j.

Emetinæ puræ gr. iv.

Misce; dosis cochlearia modica duo vel quatuor.

MAGENDIE.

## MISTURA EMETICA.

**R.** Emetinæ coloratæ gr. iv.

Infusi florum aurantii tenuioris, ℥ij.

Syrupi florum aurantii ℥ss.

Misce; dosis cochleare modicum omni semihora.

MAGENDIE.

## TROCHISCI EMETINÆ PECTORALES.

**R.** Sacchari albi ℥iv.

Emetinæ coloratæ gr. xxxij.

M. F. Trochisci ana gr. ix.; unus omne hora aut alter.

**In Chronic Pulmonary Catarrhs, in Hooping-Cough, and in Chronic Diarrhæa.**

MAGENDIE.

## TROCHISCI EMETICÆ EMETINÆ.

**R.** Sacchari albi ℥ij.

Emetinæ coloratæ gr. xxxij.

M. F. Trochisci ana, gr. xvij.

One of these lozenges taken fasting, is commonly sufficient to make a child vomit—three or four have the same effect in an adult.

MAGENDIE.

## ÆSCULINE.

An alkali found by M. Curzoneri, in the *Æsculus Hippocāstanum*, and supposed to be febrifuge.

## GENTIANINE.

An alkali discovered in *Gentiana lutea*, by MM. Henry and Cautentou. It is yellow, very bitter, aromatic, and inodorous. The dose is from two to four grains or more.

## TINCTURA GENTIANINÆ.

**R.** Gentianinæ gr. v.

Alcoholis (.903) ℥j.



Misce,—drachma dimidia vel drachmæ duæ pro dose.

*As a Tonic bitter.*

MAGENDIE.

#### SYRUPUS GENTIANINÆ.

R. Gentianinæ, gr. xvj.

Syrupi simplicis, ℥bj.

Misce—drachma una vel drachmæ tres pro dose.

*In Scrofulous Affections, excellent.*

MAGENDIE.

#### HYDROCYANIC ACID, OR PRUSSIC ACID.

This acid was first discovered by Scheele, in 1780, and first procured pure by M. Gay Lussac. It is liquid, colourless, and transparent, of a powerful deleterious odour, like that of bitter almonds, and of a taste at first cooling, but afterwards acrid and irritating. It is the most deadly poison known, a single drop, when pure, applied to the tongue of a strong dog, making it fall dead as if shot. The medicinal prussic acid is made by adding to the pure acid six times its volume, or 8.5 times its weight of distilled water. Dose, from a quarter of a drop to two drops.

#### MISTURA PECTORALIS.

R. Acidi hydrocyanici medicinalis ℥j.

Aquæ distillatæ ℥bj.

Sacchari albi ℥jss.

Misce—cochl. modicum, mane nocteque.

*In Nervous Coughs, Asthma, and Consumption.*

MAGENDIE.

#### POTIO PECTORALIS.

R. Acidi Hydrocyanici medicinalis gutt. xv.

Syrupi althææ ℥j.

Infusi glecomæ hederacæ ℥ij.

Misce—cochl. modicum mane nocteque.

*In the same cases.*

MAGENDIE.

#### SYRUPUS ACIDI HYDROCYANICI.

R. Acidi hydrocyanici medicinalis ℥j.

Syrupi defœcatæ ℥bj.

Misce et adde cum misturis pectoralibus : dosis ℥j. ad ℥ij.

MAGENDIE.

#### LOTIO ACIDI HYDROCYANICI.

R. Acidi hydrocyanici medicinalis ℥iv.

Spiritus vini rectificati ℥j.

Aquæ distillatæ ℥xss.

Misce ut fiat lotio.

*In Impetigo, and Acne Rosacea.*

A. T. THOMSON.

Dr. Frisch, of Nyborg, has relieved the excruciating pains of cancer by this lotion.

#### GUTTÆ ACIDI HYDROCYANICI.

R. Acidi hydrocyanici præparati e foliis lauri cerassi distillatis.

Dosis guttæ triginta vel drachma una in quovis vehiculo.

*Sedative.*

PARIS.

#### MISTURA POTASSII CYANURETI.

R. Cyanureti potassi gr. ss—ad gr. j.

Syrupi limonis ℥j.

Fiat mistura.

MAGENDIE.

MISTURA ZINCI CYANURETI.

R. Cyanureti zinci gr. ss. ad gr. j.

Syrupi simplicis ℥j.

Fiat mistura.

Vermifuge.

MAGENDIE.

HYOSCYAMINE.

An alkali found by M. Brandes, in the *Hyoscyamus Niger*, and containing its active properties. It has not yet been employed medicinally.

IODINE.

An elementary principle discovered in 1813, by M. Courtois, in various species of sea-weed, such as fuci and ulvæ. The modes of preparing it are given in all the systems of Chemistry. Dose from one to three grains. It has chiefly been used in bronchocele, schirrous, cartilaginous, and osseous tumours; in vicarious menstruation; in amenorrhœa; in threatening phthisis; in scrofulous ophthalmia; and in chronic cases of syphilis.

ÆTHER SULPHURICUS IODURETUS.

R. Ætheris sulphurici ℥j.

Iodinæ puræ gr. vj.

Misce—Guttæ decem pro dose.

Thirty drops contain about one grain of iodine.

TINCTURA IODINÆ

R. Iodinæ gr. xlvij.

Alcoholis ℥j.

Solve, et sumatur æger gutt. decem tres quotidie.

In Bronchocele.

MAGENDIE.

Twenty drops contain a grain of iodine.

UNGUENTUM HYDRARG. PROTO-IODURETO.

R. Proto-iodureto hydrargyri ʒj.

Adipis suillæ ℥iss.

M. Fiat unguentum.

To hasten the cicatrization of inveterate venereal ulcers.

MAGENDIE.

UNGUENTUM HYDRARG. DEUTO-IODURETI.

R. Deuto-iodureti hydrargyri ʒj.

Adipis suillæ ℥iss.

Fiat unguentum.

More active than the preceding, in the same cases.

A very small quantity only to be put upon the lint, and applied to the ulcers.

TINCTURA HYDRARGYRI DEUTO-IODURETI.

R. Hydrarg. deuto-iodureti ʒj.

Alcoholi (at 36°) ℥iss.

Fiat tinctura—guttæ decem ad viginti pro dose, in cyatho aquæ distillatæ.

Twenty-six drops of this solution are nearly equivalent to (eighth of a grain of the deuto-ioduret of mercury.

*In Scrofulous Syphilitis.*

MAGENDIE

ÆTHER SULPHURICUS CUM HYDRARGYRI PROTO-IODURETO & DEUTO-IODURETO.

R. Etheris sulphurici ℥iss.

Proto-vel deuto-iodureti hydrargyri ʒj.

Fiat solutio.

MAGENDIE

More active than the preceding, and therefore to be given in smaller doses.

PILULÆ HYDRARG. PROTO-IODURETI VEL DEUTO IODURETI.

R. Hydrargyri proto-vel deuto-iodureti gr. j.

Extracti jutepefæ gr. xij.

Pulveris glycyrrhiz. q. s.

Fiant pilule N<sup>o</sup>. viii. una vel quatuor volte marieque.

MAGENDIE

SOLUTIO HYDRIODATIS POTASSÆ.

R. Hydriodatis potassæ gr. xxxvi.

Aquæ distillatæ ʒj.

Fiat solutio—doses gutta decem ad viginti vel plures.

*In Goitre and Scrofula.*

MAGENDIE

UNGUENTUM HYDRIODATIS POTASSÆ.

R. Hydriodatis potassæ ʒss.

Adipis suillæ ʒss.

Fiat unguentum.

*In Bronchocele and Scrofulous Glands, rubbed in daily, in the portion of half a drachm, increasing to a drachm.*

MAGENDIE

UNGUENTUM ZINCI IODIDIS.

R. Iodidi zinci ʒj.

Adipis suillæ ʒj.

Fiat unguentum.

*In Scrofulous Swellings—rubbed in, in the proportion of a drachm daily.*

MAGENDIE

JALAPINE.

An alkali discovered in jalap, by Mr. Hanne, junior, of Le Ave. It has no perceptible taste or smell. An ounce of it yields about five grains of jalapine. It has not yet been employed medicinally.

LUPULINE.

A chemical principle discovered by Dr. Ives, of New York, in form of small shining yellowish grains, covering the base of scales in the hop—*Humulus lupulus*. It is very bitter, and contains the active properties of the hop. Dose not yet determined, but it is not poisonous, little danger can arise from trials with it.

PULVIS LUPULINÆ.

R. Lupulinæ pars una.

Sacchari et pulvis fine.

Tere lupulinam in mortario porcelano, dein adde gradatim charum : et misce accuratissime.

MAGENDIE

## TINCTURA LUPULINÆ.

℞. Lupulinæ contritæ ℥j.

Alcoholis ℥ij.

Digere sex dies in vaso clauso : cola, preme fortissime, et adde alcoholis satis ut unciz tres tincturæ flant. MAGENDIE.

## PILULÆ LUPULINÆ.

℞. Lupulinæ q. s.

Contere, fiat massa, et divide in pilulas.

MAGENDIE.

## SYRUPUS LUPULINÆ.

℞. Tincturæ lupulinæ alcoholicæ pars una.

Syrupi simplicis partes duæ.

Fiat syrupus.

MAGENDIE.

## MORPHINE,

A chemical principle found in opium by MM. Derosnes, Sertuener, and Robiquet. It is but little soluble. It unites with the acetic, the sulphuric, and hydrochloric acids, which are more soluble and chiefly used. The dose of morphine is from an eighth to the fourth of a grain, or more.

## SYRUPUS MORPHINÆ ACETATIS.

℞. Acetatis morphinæ gr. iv.

Syrupi accuratissime defæcati ℔j.

Fiat syrupus—dosis cochl. minima duo.

*Sedative, instead of Syrup of Diacodium.*

MAGENDIE.

## SYRUPUS MORPHINÆ SULPHATIS.

℞. Sulphatis morphinæ gr. iv.

Syrupi accuratissime defæcati ℔j.

Fiat Syrupus—dosis cochl. minima duo.

*Sedative.*

MAGENDIE.

## GUTTÆ ANODYNÆ.

℞. Acetatis morphinæ gr. xvj.

Aquæ distillatæ ℥j.

Acidi acetici gutt. iij. vel gutt. iv.

Alcoholis ℥j.

Fiat solutio.

*Sedative, instead of Rousseau's Drops, or Tincture of Opium.*

MAGENDIE.

## X. MISCELLANEOUS.

Dr. COPLAND's *Gentlemanly* NOTICE OF OUR CRITICISMS ON HIS EDITION OF DR. DE LYS's RICHERAND.

From the usual style in which the Medical Repository is conducted by Dr. Copland, and from the publicly avowed principles of the Editor, since the very commencement \* of his la-

\* In one of Dr. Copland's earliest Reviews, he attacked Clarke's excellent work on Female Discharges; not because he disapproved of the work, but because Dr. Clarke, as a general practitioner, interfered with the practice of physic. This Dr. Copland publicly avowed at the time, and he now avows, was the reason of his abuse of Clarke's work.

hours of putting down all Surgeons who practice physic ; or, in other words, general practitioners—our readers will not be surprised at his most unfounded and false attack on the Editor of this Journal, because he dared to criticise the Notes on Richerand. As but few of our subscribers take in the Repository, we shall give Dr. Copland all the benefit which he wishes to derive from this contemptible production, by printing it *verbatim*, though he had not the manliness to print our exposé, because, perhaps, he found it easier to call it “ loose observations,” than refute it. As Sir Francis Burdett said the other day of Hunt, we may say of Dr. Copland, his enmity is preferable to his friendship.

“ Dr. COPLAND'S *Answer to the Remarks on his Appendix to Richerand's Physiology, contained in Anderson's Journal of Medicine.*

“ The Editor of Anderson's Quarterly Journal of Medicine has, in his Number for January 1825, made certain loose observations in support of his former remarks on some of the opinions we have espoused in the Appendix to M. Richerand's Physiology, and in reply, as he supposes, to our answer contained in the Medical Repository for November 1824.

“ As he could not controvert the facts we had previously stated, he therefore resorts to the following allegations and misrepresentations, which we now proceed to expose.

“ 1st. He says, ‘ We give Dr. Copland all the benefit he wishes to derive from the dates he has stated ; but we may be permitted to remark, that the paper read to the Medical Society cannot, in any sense of the word, be considered as published ; and the paper published in the Repository was nothing more than the titles of chapters and sections, as may be seen by his own quotations in the Appendix to Richerand.’ The quotation in the Appendix from the original paper in the Repository is only a small part of that paper ; yet it will be allowed, by every anatomist and physiologist to contain opinions which—whether right or wrong is nothing to the present purpose—he will not find in any other work with which we are acquainted,—and we are surely as well acquainted with medical writings as he is, or any other person like himself who does not belong to the Medical Profession. Although the opinions in question are given in the form of a classified synopsis, yet are they, in that form, clearly, but briefly, stated as inferences which, though each may require—and was intended to have attached to it—an analytical exposition, yet do they collectively form an inductive system of physiological and pathological doctrine.

“ Whether the paper read to the Medical Society was, in point of fact, published or not by its being read there, we care not. It was at least published to the members of that Society. The circumstance at least proves that we entertained the opinion at the time, if not

previously to the time, of the paper being read there; and this was all we wished to claim from the statement of this fact.

" 2d. He next says, that although the greater part of the Appendix may have been printed off before the appearance of Lobstein's work, why not mention him in the preface, or in an additional note at the end of the Appendix?—This was, in our opinion unnecessary; for we did not give the opinions, in this part of the Appendix, as opinions which were then made public by us for the first time. We considered them as published, to all intents and purposes, when they appeared in this Journal, if not before. M. Lobstein's work, as well as works of others, appeared soon after the time when the notes, relating to subjects on which these works treated, were written, but we had neither space nor time then to recur to these subjects. As to mentioning the matter in the preface, that was unnecessary—indeed the circumstance of the appearance of M. Lobstein's work did not suggest itself to us when we wrote the preface, and until the moment when it was written, we had no intention of writing any preface at all. We had also very good reasons to believe that, before long, another edition of the work would be required, in which the omissions inseparable from the first might be attempted to be supplied.

" 3d. This writer next changes his plan of attack, finding himself foiled in his first attempt, and states, that 'there are other names not mentioned in this part of the work—such as Bichat, Reil, and Richerand himself, in the very work on which he was commenting—to whom we can clearly trace almost every fact and inference which Dr. Copland claims as original.' To this we reply, that the facts and opinions stated in the part of the Appendix in question are not those of Bichat, Reil, and Richerand; and that this writer is ignorant not only of the writings of these physiologists, but also of the scope of what we have there stated. The opinions of Reil are very different from ours: a few of the doctrines espoused by Richerand and Bichat approach somewhat nearer, in some particulars, and perhaps the superficial or cursory reader may think them nearer than they are; but they are as different from our opinions as the usually received views on the subject. The matter of difference and agreement we never wished to conceal;—indeed, in the original paper read at the London Medical Society, we adduced this matter fully, and availed ourselves of the facts those writers furnished in support of our views, in the more extensive field which these views embrace. But neither of these authors originated the opinions they espoused, and which are generally imputed to them. Winslow and Johnstone promulgated almost all that can be adduced from Richerand and Bichat. To have noticed these latter writers would have obliged us to criticise many of their doctrines, and to shew wherein we differed from them, and wherein we agreed. This would have led us into a discussion which would have been incompatible with the space to which we were limited, and to our agree-

ment with the proprietors of the work. We therefore thought it the better way—and we think so still—to state succinctly our own views, and leave it to the learned physiologist to judge respecting them; we only wished credit for what was strictly our own; what had been previously stated, we did not wish to assume, and what we believed it did not become us to reject. We leave the matter in the hands of those best able to decide respecting it; but certainly a person who has never dissected a subject, and who is in no way a member of the Profession, is not a person to give an opinion on a matter of this description. To those who may feel any interest in the subject, we beg leave to suggest a reference to Winslow on the abdominal nerves, to Johnstone on the ganglions, to the text of Richerand, to the writings of Reil, to the general anatomy of Bichat, and then to the original paper in the Repository for May, 1823, and to that in the Appendix to Richerand. They will then see what we are most anxious to make public—they will perceive what belongs to those authors and what to us.

“4th. The writer proceeds next to question the truth of these views. This he is welcome to do. We care not about their becoming matters of vulgar belief. He quotes Mr. C. Bell, as he supposes, in opposition to them, in great triumph: but Mr. Bell's objections are levelled at the opinions of Bichat, from whom we also differ—so much for this writer's knowledge of the matter, on which he has the assurance to decide. Mr. Bell is, however, not altogether correct in the quotation adduced by this writer; for it contains postulates which we challenge Mr. Bell to substantiate. We can also quote, from the same work of Mr. Bell, opinions in unison with some of our own, and in direct contradiction of some of those quoted by this writer. As to this, we refer to the review of Mr. Bell, at pages 131 and 132 of the present Number.

“5th. He quotes a passage, and states his inability to understand it. We admit his inability—we should be sorry to dispute it;—we, however, happen to know the reason, and will inform him how he may have his judgment improved: let him study the principles of the Profession which he has usurped; and, above all, let him study anatomy.

We now take leave of this writer. We apologize to our readers for the notice we have taken of him. We assure them, however, that we shall not err in this way in future as respects him, whatever he may have the assurance to state. But we shall most certainly inform them, and the medical public generally, if he again trouble us with any of his observations, of certain doleful, and not invidious reasons, why he attacked us in the first instance and of certain other reasons, which render it a duty to ourselves to take no further notice of what may proceed from him, or from similar quarters.

J. C.”

This will form a fit companion to the attack on Surgeons and Accoucheurs, which we have copied above from Dr. Copland's Journal. We have now done with him, and shall not again be readily tempted to obtrude him on public notice.

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*N. I. Elements of Pathology and Therapeutics, &c. &c.* By  
 ZALEB HILLIER PARRY, M.D. F.R.S., &c. &c. Second  
 Edition. 1825.

THIS celebrated work must, we believe, be too well known  
 our readers to render it necessary that we should expatiate  
 on its claims to consideration. Our purpose in noticing this  
 second Edition is principally to have an opportunity of men-  
 tioning that it is accompanied by an Appendix, containing a  
 fragment of the proposed Second Volume, which should have  
 completed the work, and of which the execution was interrupted  
 by the attack of disease, which ultimately terminated the life of  
 the Author.

We are pleased to find, that though there are no means of  
 compensating the loss thus sustained, Dr. Charles Parry, who  
 was the Editor of this Volume, and the son of the late Dr. Parry,  
 has resolved to favour the profession with certain collections  
 of his unpublished manuscripts, which there can be little  
 room for doubting will tend to increase the reputation which  
 his published writings have obtained for him.

Previously," says Dr. Charles Parry, "to the communica-  
 tion of much additional matter which is in his possession, the  
 Editor has thought it an act of justice to endeavour to illustrate  
 some of the principles and opinions advanced in this work, and  
 the "Experimental Enquiry," by a comparison with those  
 which have been attributed to their Author, in the writings of  
 various commentators, who profess to understand and criticize



his doctrines." "This attempt has been made in a Preface, and certain introductory Chapters, which will precede the collections from the Author's unpublished manuscripts, and which, while they generally investigate the points at issue, have a more particular reference to the subjects of Vascular Irritability, Inflammation, Determination of Blood, and Nervous Diseases." In the "Collections," however incomplete, and however inadequately they may represent the extensive work for which they were prepared, will be found the best defence of the Author's system, and the most satisfactory commentary on his doctrines." "Of the character of these miscellanies, and the grounds upon which their selection and arrangement has proceeded, the Editor has given an account in the prefatory notice, to which he has already alluded."—Pref. viii.

The Appendix contains between forty and fifty pages, and treats in the aphoristic manner of the Elements: "1st, The Effects of Habits in creating Predisposition to Disease; and 2d, of Predisposition from Habits, as a Cause of increased Determination." This valuable fragment bears the stamp of the same ingenious and inductive mode of argument by which most of the works of this author are distinguished. To those who possess the former edition of the Elements, we should think the Appendix an indispensable acquisition, and on that account we would suggest to the Editor the propriety of publishing it in a separate form, if, indeed, he has not already done so. In the mean time, we shall put our readers in possession of some of the valuable matter contained in it.

*Inflammation.*—The theory adopted by Dr. Parry is very different upon this important subject to that of Philips, and other late authors. Philips, for example, thinks the blood moves with diminished velocity in the inflamed part; Parry that the velocity is not diminished. In the Appendix we meet with the following passage:—

"In inflammation, although the first sensible deviation from the natural state of circulation in the vessels, is an unusual flux of blood within the part; constituting an increased momentum, yet, in the subsequent stages, that momentum may so far disappear, that the blood may for a while stagnate in the capillaries, until a renewed or increased contraction of those vessels may occur, and gradually produce the usual phenomena which attend certain local salutary processes in inflammation.

"So of other diseases, already specified, not amounting to inflammation.

"It is the first of those states, on which all the subsequent phenomena depend, to which I wish chiefly to call the attention of the reader in this place.

“This state must be the joint product of the condition of the part, and the exciting cause acting on it.

“Conformably to the general principle already laid down, under a strong predisposition, a slight exciting cause is sufficient to give rise to a malady: and conversely, under a slight predisposition, a strong exciting cause is requisite.

“*Powers of Arteries.*—I have elsewhere endeavoured to shew that the larger arteries have two powers, by which, when dilated to a certain degree, they can, within certain limits, contract themselves; the first, and least extensive, being the mechanical power of elasticity, and the second, and most extensive, being their tonic or vital power.

“I have also proved, that, in health, those arteries are always in a forced state of dilatation with regard to both powers; so that, when the distending cause, or the blood which they contain is removed, both their elasticity and tonicity visibly act, and jointly tend to reduce the light of the vessel.

“Since also it appears, that, as long as organic life continues, the tonic power of such vessels contracts them within the sphere of their elastic power, which, however, operates to re-expand them to a certain degree, after their organic life has ceased, we have reason to infer that this tonicity acts only in a mode similar to that of muscular parts, that is, by shortening the texture possessing it; or, in a hollow part, by reducing its area.

“*Powers of Capillaries.*—Now as there is reason to believe that capillary vessels, employed as conduits for carrying on the circulation, have powers similar to those of the larger arteries, though perhaps differing as to the proportion of those powers, we have no reason, either from analogy or actual observation, to conclude, that, when unduly dilated, they owe this state to any other causes, than either an increased force of dilatation within, or a defect either of tonicity or mechanical resistance.

“When, however, we observe the sudden changes which occur in the state of these vessels, so that, not only the contact of a grain of sand with the conjunctiva shall almost instantly fill with blood the capillaries of that part; and, more especially, when we contemplate the instantaneous effects of certain mental emotions: as causing a rush of blood into the colourless vessels immediately under the skin, without our being able, in either case, to discover any adequate change in the movement of the heart; we feel ourselves compelled to deny, that such causes can act immediately on the elasticity of the vessel, and, on the contrary, are disposed to conclude, that the phenomenon is dependent on a change produced in the tonicity of the minute vessels of the part.

“It is true, that in the first case, the capillaries affected do not seem to be of that class, which is intermediate between the arteries and the veins; and which, therefore, does not always carry red blood. But it is these vessels which appear to be most conspicuously the seat of local inflammation and various other maladies;

and the same circumstances of disease, and restoration to health, probably take place in both.

"In the vessels of a part is their defect of tonicity, or vital contractility; which, conformably to what has already been stated under the head of various diseases, may exist in such a degree, as to admit of such diseases even under the natural impetus of the blood.

"Why, from the causes which have been detailed, such a disposition to local defect of tonicity should take place, we can, in many respects, at best, only plausibly infer.

"With regard to mental causes, we see a considerable degree of analogy between their action on the tonicity of vessels through the sensorium commune, and the operation of pressure on the brain, in producing paralytic relaxation of various muscles.

"There is, however, another analogy of a more obvious kind; which is the diminished contractility usually observable in muscles, after they have been long or violently stimulated to action.

"On this principle, we may reasonably explain the disposition to excessive determinations of blood, which is so apt to follow violent or long continued increased impetus in certain parts, or the whole, of the sanguiferous system; such impetus having incapacitated the capillary vessels from that degree of vital contractility, which is necessary to the continuance of their healthy functions.

"Hence we find, that persons, who, during what is called health, have a preternaturally quick or strong pulse, are much more subject to all the diseases of excessive local determination than others, whose circulation is constitutionally more moderate.

"In such cases, the general increased impetus, though usually to be considered as an occasional or exciting cause, acts as a cause of predisposition.

"From what has been said it seems to follow, that, whatever may be the causes of excitement, the state immediately constituting the disease in such cases, is the want of a due degree of tonicity in the capillaries immediately affected.

"It is highly worthy of inquiry, through what media the several causes of predisposition, already specified, operate in increasing the general or local momentum of the blood.

"Here it is obvious, first, that all of them except indolence, immediately produce an increased action of the heart, and consequently, for the most part, an increased general momentum of blood. Secondly, indolence and full living produce a tendency to general plethora, or fulness of blood.

"On the agency of the first of these causes, the explanation already given is sufficient to preclude the necessity of any further enlargement.

"The second state shews itself by the circumstances of the pulse, venous destitution, general heat, and frequently obesity of the patient, relatively to that of other persons of the same sex, age, and bulk.

His view of what has been generally denominated plethora, accords with the same principles; which cannot be denied to be beautifully simple, however much their absolute correctness may be objected to.

*Plethora.*—"If by it we understand merely a fulness of certain vessels, the expression certainly cannot be considered as a term of distinction, since, during life and health, all the vessels, whether arteries or veins, are undoubtedly full of blood, that is, there is no interval between their coats, and the blood which they contain.

"It seems, therefore, to apply only to the existence, in any vessel or vessels, of such a quantity of blood, as dilates it or them beyond the degree which is usual in the same persons, or others of the same bulk, under other circumstances.

"In the same sense, I understand the phrase, "fulness of blood," except where the context naturally authorizes another application.

"On this subject, much information might reasonably have been expected to accrue, from the experiments on the transfusion of blood from the vessels of various animals to those of others.

"Unfortunately, however, these experiments, dictated by the humoral pathology of the time, had chiefly in view the question, whether it might not be practicable to restore health and prolong life, by the substitution of pure blood, for what was supposed to be crude or vitiated. They consequently afford little useful information.

"It appears, however, that in the greater number of the instances, in which this experiment was made on persons labouring under disease, the progress of the malady was evidently accelerated.

"In one or more other examples, where there was little or no previous disorder, inconvenience is said to have ensued; and, in one such example, in which a somewhat larger quantity of blood was infused, than that which was taken away, a fatal effect followed.

"In this last case, the result was phrenitis and bloody urine; circumstances which exemplify inflammation and hæmorrhage, two of the modifications of excessive sanguineous determination already specified.

"Hence, so far as one example goes, is exhibited the tendency of a general state of plethora to produce local disease, through whatever steps that process may be effected.

"We want better evidence than any which I am able to adduce, as to the cause of many simply local increased determinations of blood, arising under a plethoric state of the constitution; although the fact itself seems to have in its favour the concurrent testimony of medical practitioners.

"It seems, however, as if the more immediate and ordinary influence of a certain degree of undue plethora were on the heart itself, which is thereby stimulated to increased action, and therefore

is the great cause of an excessive momentum throughout the sanguiferous system, and, in the mode already explained, of an undetermined determination to certain parts of the system of the capillaries.

"What share an accidental, or habitual plethora of any, or all the veins, may have in producing an obstruction to the free evacuation of certain parts, or the whole of the arterial system, it is difficult to determine.

"The existence of a venous plethora, or fulness, is supposed to arise accidentally, from various causes; and is believed to exist constitutionally, after a certain period of life, when the balance of the sanguiferous system is so changed, that the preponderance, which, at an earlier period, occurred in the magnitude of the arteries, is now transferred to the veins.

"This difference seems to be tolerably well ascertained from the actual inspection of the veins themselves in old persons, relatively to the same veins in young persons of the same bulk and degree of obesity.

"Such a preponderance of the arterial system in early youth naturally grows out of the necessity of providing for the growth of the several parts of the animal frame; a function, which is the peculiar business of the arteries; while, at a more advanced period of life, after the growth of the body has been completed, these vessels are chiefly concerned in carrying on the blood for the purposes of secretion and excretion, and of supplying what the constitution is habitually losing by those processes.

"Hence, at that early stage of life, this system is proportionably larger, not only than the venous, but than itself, after the perfect growth of the body. This may be easily seen by any one, who will measure the circumference of the carotids and many other arteries in the infant, comparatively with those of the adult.

"The functions of the venous system itself, and the specific share which it has in carrying on the circulation of the blood by its own inherent vital powers, seems to be as little understood as any process in the whole animal economy.

"Hitherto, the process seems to have been considered as being under all circumstances, chiefly, if not wholly, mechanical; depending very little, if at all, on the propulsive power of the heart, but principally on the effects of lateral pressure, by the action of the muscles in respiration and voluntary motion, and by the alternate dilatation and contraction of the arteries, from the systole and diastole of the left ventricle.

"With regard to the last of these causes, it cannot exist at all, except under a mechanical compression of the arteries by the surrounding parts, and must be nugatory for any important purposes of venous circulation.

"That the former actions have their share in mechanically propelling the venous blood, seems tolerably well ascertained from the obvious tendency of the valves of the veins, and from the increase of circulation, and acceleration of breathing, which accompany all

ds of increased muscular exertion ; while, on the other hand, effect of rest is immediately to diminish both."

Such is an ample specimen of the additions left by Dr. Parry to his *Elements*; our space will not permit us to give more ; but as most of our readers will probably possess themselves of the original, we regret this the less. There is another work of Dr. Parry's just published, which we shall take the earliest opportunity of analysing.

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II. *A System of Pathological and Operative Surgery, founded on Anatomy : illustrated by Drawings of diseased Structure and Plans of Operation.* By ROBT. ALLAN, F.R.S.E. and F.A.S.E. &c. &c. Vol. 3. 1824.

Mr. Allan has arrived at this the first part of his 3d Volume, without our having had the opportunity of introducing him to our readers. If, however, we are to place confidence in the advertisement prefixed to it, our negligence is hardly to be regretted, at least on his part ; for we are there informed, " that, in consequence of the urgent demands which have been made, both by his pupils and the public, for the 3d Volume of his *System of Surgery*, the author has been induced immediately to lay before them as much of it as the other important demands on his time have permitted him to complete ; and hopes to be able, early in the Spring, to publish the remainder of the work." Now, not having ever formed any part of his auditory, and not having had an opportunity of judging of the materials of which it is ordinarily composed, we will not commit ourselves to any rash speculations, as to what may happen to be its particular taste in systems of surgery ; but this much we will say, that if the public, by which we understand the Profession, have taken any considerable share in clearing Mr. Allan's leaden sheets from the shelves of his publisher, we must ourselves have hitherto formed a most incorrect idea of its general powers of discrimination. Not that we have any doubt of Mr. Allan's immediate assurance of the success, that is, sale, of his book. It is too sure to be sure ; the only question is who buys it : the public and my pupils, says Mr. Allan. But little explanation is necessary, in order to render the whole affair intelligible. Among the manifold arts of book-making (and it must be allowed that there is scarcely any limit to the Protean shapes this malady assumes), we are not acquainted with any more refined ; and

we might perhaps add, in a pecuniary light, more successful, than that of combining the writer and the lecturer. We need scarcely point out the *quo modo*; but lest we should be misunderstood, we will just mention the principle on which the *manceuvre* proceeds. It is this: the book, it is hoped, may be the means of enticing hearers within the sphere of the lecturer's fascination; and once there, he must be but imperfectly acquainted, indeed, with the ordinary "*procedé opératoire*"—in such cases, if he allows the victim to escape without contributing his share to hasten the approach of that epoch of rejoicing, when the public are to be informed that this Treatise, or the other System, is to appear with all possible celerity in a Second Edition, the first having been long exhausted. This is no fanciful picture; nor are we aware that it is exaggerated: on the contrary, facts of daily occurrence bear an indirect but convincing testimony to its correctness. Without some such contrivances as those we have now spoken of, how is it possible to suppose that we should hear so often as we do, of the repetition of editions of works without credit for the materials of which they are composed, or the method in which they are put together? It would of course be invidious to mention names unnecessarily, but we dare say there are few among our readers who are not themselves capable of filling up the blank to any required extent.

And this brings us to another point: in attacking a system we are far from meaning to attack individuals, and much less Mr. Allan, with whom, except as a writer, we are in every respect totally unacquainted. The faults too, which we are inclined to find with his book are those of omission, not of commission. It is but justice to him to say, that we have not anywhere in it been offended by those gross errors in science, and even in grammatical composition, of which so many of our modern aspirers to the literary honours of the profession are guilty. Neither are we among those who look for novelties, and what is called originality, in a systematic work; just the reverse: for we believe that we might safely lay it down as a maxim, seldom likely to lead us into error, that the chances of meeting with a tissue of imbecile absurdities, bear a direct proportion in all such performances, to the confidence with which the author proclaims the novelty and peculiarities of his views. Nor need we say that it is quite within the limits of possibility that a writer should be at the same time quite original, and very ridiculous and wearisome to his readers.

But it is not enough that the composer of a system should manage to steer clear of blunders in language, and mistakes o

ignorance in science. The world naturally looks for qualifications of a higher stamp; for extended and applicable knowledge, not merely of books and words, but of facts; for impartiality; and more than all, for a sound and discriminating judgment, more useful than every thing else, by enabling him who is fortunate enough to possess it, to avail himself of the apparently confused materials which others have amassed for his employment, to separate the grain from the chaff, and to convert the basest metal into the purest gold.

Compared with such standards as this (which, if taken to the letter, we readily allow can rarely be realized), the deficiencies of ordinary performances become doubly conspicuous. Mr. Allan has no just cause for feeling hurt if we say that he does not constitute any exception to the general rule. The publication of a book of any kind, much more of one having pretensions to rank as a System, is an invitation to criticism, and whether directly or by implication, is quite a matter of indifference; and we conceive that whilst the critic avoids the imputation of personality in his language, and disavows personal feelings as the actuating cause of severity, the author, though he may feel inclined to appeal from the jurisdiction, will find few to sympathize with him in his dissatisfaction with the sentence. We have, therefore, no hesitation in saying, that to us Mr. Allan's System of Surgery appears a very common-place production; and that even if it should sell to the ninth and tenth Editions, our opinion would still be, that it is not calculated to add to his reputation among those members of the Profession, whose opinions are entitled to respect.

A word more: it may be asked why not analyse the book, in order to point out its defects? We answer one question by asking another; why occupy our pages with what we conscientiously believe to be an inferior performance? and with what grace should we tell our readers at the end of eight or ten pages of extracts, what we have already said in a much smaller compass? In a word, we do not pretend to review Mr. Allan's System; we simply give an opinion of it; and even that we have only been led to do, by the opportunity it furnishes of explaining a book-making, or rather a book-selling contrivance.



ART. III. *An Analysis of Medical Evidence, comprising Directions for Practitioners, in the View of becoming Witnesses in Courts of Justice, and an Appendix of Professional Testimony.*  
By JOHN GORDON SMITH, M.D. pp. 386. 8vo. Lond. 1825.

This subject is more important than we fear it will be considered by the great body of the Profession. The book indeed is rather, we look upon it, an anticipation of what might be wished by some to become a regular branch of professional study; but which it is to be feared is still far—very far from being so. Country Practitioners are for the most part contented with a single book on Medical Jurisprudence, and will not, we should think, be willing to purchase one on a detached part of the subject. For this reason Dr. Smith's work cannot turn out a very profitable speculation. We shall here give such extracts as will shew the nature of the publication, and its reference to Dr. Beck's work on Medical Jurisprudence, which, since its republication in this country, has become the standard book.

*Most advisable manner of giving Medical Evidence.*—From this chapter we select the following remarks:—

“Whether our readers decide for ‘costive retention,’ or a flow of garrulity, there is one very important point which they will do well to look to—*Let them think!*”

“Exceptions as to general facts, or established practices relating to the point at issue, claim very marked notice in this place. There is a wide difference between founding an opinion, or giving testimony upon rare deviations from the course of nature or of events, and omitting to notice exceptions that belong as strictly to the rule as the circumstances that constitute it. A scientific witness would be truant to his own character if, when publicly called upon to speak of his knowledge, he gave an imperfect or an erroneous statement, which it might fall to the share of others to correct; and it does appear to me, that it would be little more in his favour if he corrected himself upon compulsion. The advocate who has to conduct the indirect examination, and he also who might re-examine, through whom alone the witness can have the opportunity of making such corrections, may, either from being unacquainted with the whole bearings of the subject, or from other causes, omit to furnish him with it. The report goes out to the world, and the testimony of the medical man runs the gauntlet of all those who may be able or disposed to display its defects, and more serious vices. An example, figurative of what is here alluded to, took place under circumstances of unusual interest, not long ago; and a lesson was drawn in one of the professional journals, which, I think, may be appropriately quoted.—Speaking of one of the witnesses, it is obser-

ved, 'This gentleman seems to have been truly unfortunate in the grounds of his opinion. It would appear as if he had formed it from the details afforded by a servant—and that a discarded one. *In his cross-examination, also, he admits exceptions enough to eat up his evidence in chief.* It is with no small regret that we find ourselves compelled to animadvert upon the *testimoniary* deportment of men of eminence ; but it has been the fate of the most eminent, occasionally, to have given too much scope for animadversion on similar occasions : and we seize the opportunity to say to our younger brethren, that to us, who are in the habit of looking at medical practitioners, in the situation of witnesses, with a scrutinizing eye, they appear in a disadvantageous light, when they allow most important and most manifest parts of the truth to be wrung from them by a cross-examination.

"It is surely unnecessary to say any thing more about speaking dubiously. It would be a decided dereliction of duty to speak thus, when we can do it positively ; but it may be often right to speak even in that manner. Leaving the fact in doubt, is not leaving the accused in danger ; but, the caution actually required here, it is hardly possible to convey in concise language. In a more circumlocutory form, it appears to me, that the reluctance of these persons relates to the risk that may follow, should they leave in doubt any point upon which they may be required to speak, and that they consider it their duty to speak positively, or plead total ignorance. Now this is not fair, either towards science, or towards the persons interested in what is going on ; and I should prefer giving even an undecided opinion, where the subject is not known to have an accredited form : otherwise, its real importance may be under-rated ; or it may be unjustly considered to be a visionary hypothesis, when it merely defies satisfactory explanation.

"In consequence of our being sworn to disclose the whole truth, we may be called upon to reveal secrets confided to us in professional confidence. This involves a very delicate consideration, and one that I apprehend is but imperfectly understood. 'Barristers and attorneys, to whom facts are related professionally during a cause, or in contemplation of it, are neither obliged nor permitted, though they should so far forget their duty as to be willing to do so, to disclose the facts so divulged, during the pendency of that cause, or at any future time.'—"This rule of professional secrecy extends only to the case of facts stated to a legal practitioner, for the purpose of enabling him to conduct a cause ; and, therefore, a confession to a clergyman or priest, for the purpose of easing the culprit's conscience, the statement of a man to his private friend, or of a patient to his physician, are not within the protection of the law. We should certainly think, that the friend or the physician, who voluntarily violated the confidence reposed in him, acted dishonourably ; but he cannot withhold the fact, if called upon in a court of justice."

"I am by no means able to venture upon a question of such

magnitude, and hardly know how to choose language for the conveyance even of a doubt for others to satisfy themselves, that the practice of the courts in Great Britain is in strict accordance with the foregoing view of the matter, every one well knows; and it may be equally certain that they possess the *right* as well as the *power*, of compelling witnesses to such disclosures; but to my apprehension it is not equally clear. A precedent is, in law, a mighty authority; and I am quite satisfied, that a point which has been so often and so uniformly ruled, will never be ruled otherwise in the courts of Westminster Hall: I am also well aware, that to *law*, and rules of court, we must yield, or the administration of justice would be impeded. But although satisfied on those points, I am not contented that we should be placed beyond the pale of those, to whose private and confidential dealings with their fellow-citizens, such respect is shown. I will not go at large into the question, my design being merely to draw the notice of my brethren to the circumstance, and to put them upon their guard as far as possible; yet will I say that circumstances may occur, in which a man of a delicate and honourable mind, being the depositary of certain things communicated to him, either under the seal of professional or private confidence, (for the distinction is not to be entertained here,) would endure much ere he would reveal. But such a situation is peculiarly distressing, because, on the supposition that resistance might be maintained, he not merely exposes himself to personal suffering, but incurs the charge of disregard to the interests of justice, and dereliction of duty to his country: in other words, he will be considered as allowing the private claims of an individual, to set aside those of the public weal. Let it be distinctly understood, before I go farther, that I am not alluding to the case of the priest and a culprit's conscience, but to matters (it may be) of the last importance to the character of individuals and the peace of families, arising out of circumstances of a purely private nature, and in no way relating to affairs of state or municipal interest. It will at once strike the manly mind that, in regard to females, we might be called upon to reveal that, of which the promulgation would, to them be worse than death itself.

"All writers on this subject are not of the same opinion. In 'Medical Jurisprudence,' it is noticed in a cursory manner, and we are informed (rather, I suppose, by Mr. Fonblanque than by Dr. Paris,) that 'when the ends of justice absolutely require the disclosure, there is no doubt that the medical witness is not only bound, but compellable, to give evidence, ever bearing in mind, that the examination should not be carried further than may be relevant to the point in question; of this the court will judge, and protect the witness accordingly.' This is unquestionably sound doctrine, as drawn from the practice of our courts; but as, in my very humble apprehension, the matter seems to be one remounting, in its original bearings, rather to a question of general right, than of the law of any particular state, I beg to quote from a good French writer on Le-

gal Medicine, a sentiment of rather an opposite tendency :— The tribunals neither ought, nor have the power to exact from a physician the revelation of a secret confided to him in consideration of his office : at all events he may, and ought to refuse. Religion, probity, nay the rights of society, make this a law. Still more are we bound to secrecy, when not compelled to disclose. Upon this point, casuists and jurisconsults are of one opinion.'

" Zacchius enumerates *loquacity* among the errors of physicians cognizable by law, and censures it as particularly deserving of punishment, when it leads to the disclosure of secrets : upon which he alludes to the clause binding to secrecy, in the celebrated oath of Hippocrates, as an obstacle on the part of those who have taken it ; and, in his famous casuistical way, first puts a case or two, and then leaves us the full force of the dilemma to contend with. I must add, that he distinguishes between judicial revelation and that which is not ; ' Nam in judicio tenetur omnino veritatem detegere ;' yet even here he seems to be in the same predicament as myself, with regard to the original merits of the question ; for he does no more than tell us, that to make such disclosures is held to be necessary.

*Professional Decorum in giving Evidence.*—Dr. Smith gives us the following remarks on this subject. Our readers will observe that they are somewhat verbose and common-place :—

" Let us go to this duty without a humiliating apprehension, which will infallibly injure us. Let us leave bad temper and a suspicious disposition—leave impatience, if these be the infirmities of our nature, at home. Let us carry with us our share of that commodity, so necessary on all occasions, viz. self-respect ; and clothe ourselves in our best manners, and choicest suit of intellectual garniture. Let us maintain the spirit, and observe the deportment, that should exist between gentlemen ; and if there should, by rare hazard, occur any cause for dissatisfaction, comport ourselves even then in the same capacity. I grant the occasion is one that brings inevitable uneasiness to many ; but I cannot help thinking that, to a competent witness, it is very much of a bugbear in reality. I will admit, that now and then a disposition may be manifested to treat a witness unfairly, and that it is hard to say to what one may be provoked, who allows this to take effect on his irritability ; but the proper way of defence for him who may be assailed in this manner, will be an appeal to the court.

" Of all things, we should be cautious as to trying the lawyer at his own weapons. It has been well represented by a medico-legal writer, whose own conduct under a most teasing and overbearing course of examination I shall have occasion to exemplify, that " the lawyer's object being the interest of his employer, for the fulfilment of his duty he is frequently compelled to resort to a severity of investigation which perplexes the theories, but more frequently kindles the irritable feelings of the medical practitioner : however

dexterous he may show himself in fencing with the advocate, he should be aware that his evidence ought to impress the judge, and be convincing to the jury.

"The practical application of this may be considered very simple: at all events it must be left, in great measure, to the circumstances and particular taste of the individual concerned: and, with a single additional hint, I shall pass to another point, hoping that what has been adduced may have the effect of turning the mind into the proper channel for strengthening itself for the contest. I know some who are perfectly capable of trimming even a lawyer, and in a way that would be effectual enough. Such will not be offended with me, if I intreat them to reserve their *wit* for other occasions. If to them, personally, the indulgence of the impulse might not be dangerous, the example would be highly so; and I am persuaded that they will consult their own dignity and interest better, by not treating lightly the serious business of a court of justice. In some the natural impulse is so powerful, as to render it impossible not to retort, when assailed with that very dangerous weapon, and upon such it might be vain to enjoin absolute forbearance: I shall, therefore, restrain my exhortation to putting a check on the propensity, and to avoid any attempt to give what is termed a *set down*. If such an upshot supervenes as a matter of course, it may all be very well: but I shall conclude this chapter with an exemplification of the error against which this last caution is more particularly directed.

"Not very long ago, an apothecary, who had previously been clerk to a barrister, was examined as a witness in the Court of King's Bench. One of the most eminent counsel of the present day, was particularly desirous to ascertain from him how long he had changed his calling; and at length drew upon himself the following piece of intelligence — "I began the study of medicine at a much earlier period of life than the late Lord Erskine did that of law; and he attained to far greater eminence in his profession than ever you will!" For this retort he was deservedly chastised by the judge, who, in recapitulating the evidence, very properly remarked, that whatever that witness might have learned in his two professions he had not learned manners; for the answer he had given to Mr. — was very impertinent."

"In considering the decorum due to the profession, it is impossible to overlook the deportment of practitioners towards each other. We are not unfrequently called upon to give our opinions as to the character and conduct of our brethren. This must inevitably be the case, when the question is one that relates to the claims of a practitioner seeking recompense for professional service, or when the efficacy of those services is impugned. When we do think well of our brethren, such a duty must indeed be pleasant: for there is nothing more gratifying to a generous mind, than to bestow commendation on those who deserve it. Affirming (from the views I have been led to cherish of the true influence of our pursuits upon

the duly regulated character,) that kindness and generosity are particularly congenial to the medical *philosopher*, I am under the necessity of adding, that a disposition to snarl and bite is *unnatural*, as well as unamiable. Sometimes, however, it is our duty to disapprove; but in so doing, there is a choice of modes. That case must be almost incomprehensibly flagrant, which calls upon us to enter voluntarily or gladly on such a task, whether it is to be performed officially, or otherwise; but as our present business hardly admits of contemplating a *voluntary* appearance for such a purpose, the caution may be restricted to the manifestation of triumph, gratification, or any other disposition at variance with that regret which the misconduct of one of our body ought to inspire. It is said that the world is not a judge of medical character; but I do not see any occasion at present for examining the truth of this assertion, knowing that the liberal and well-informed of the community are disposed to think well of us, and to appreciate (what cannot be denied without betraying ignorance of that which it is shameful not to know) the liberality of medical men. Let us beware of committing felony on our own reputation, by submitting to the baneful action of a different spirit. The great safeguard will be the habitual cultivation of liberal modes of thinking, which will incline us to do what we ought ever to aim at—to cover a brother's failings. Far be it from me to trammel the profession with obligations to screen from the consequences of criminal ignorance, one who may have presumed to stand in a place which he was utterly unqualified to occupy; but these are not often the objects towards which attention is in this way directed."

*Experience and Authority.*—On this subject Dr. Smith remarks:—

"Let me not be understood to despise experience—still less would I advocate a blind reliance on authority. I trust, that the more precise ideas I have attempted to attach to the terms used in this chapter, will set aside any such imputation. I am fully aware of the mischief that has occurred to medicine, from the overbearing influence of great names, and have long ago recorded sentiments on that point, which I have not yet been led to change\*. Unless, however, a medical man enlarges his experience by a knowledge of, and deference to, that of many others, his own personal stock is not likely to be worth much. All men are inclined to place great reliance in their experience; and those who have had least, are sometimes usually vain of their share. Young men have often surprised me by the familiarity with which they have used the word, when evidently mistaken as to the nature of the thing implied; and I must confess, that my suspicions are apt to be excited, when I meet with a specimen of this purely experienced character, armed

\* In referring to the London Medical Repository, Vol. XII. page 106, (for August 1812,) I claim a production which, had my original view been fulfilled, I had long since avowed.

*cap-à-pié* with his experience, and eager to blind his less fortunate neighbours with its dazzling refulgence."

These extracts will shew we think incontestibly that there is little in this volume that can be called new, or that might be very useful to any qualified witness: those who are unqualified will find but scanty instruction on any of the professional points which they may be required to know. In a word, we have not for a long period seen a work that was less wanted than this.

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ART. IV. *Elements of Medical Jurisprudence*. By T. R. BROWN, M.D. &c. &c.

We now resume our Review of Dr. Beck's work; and as it is so little susceptible of analysis, we shall in general content ourselves with a selection of its most striking passages, particularly those in which the Professor has thought proper to express his own sentiments.

*Persons found dead.*—The medical practitioner, it cannot be too often repeated, should be guided by the strictest impartiality; he should lend a deaf ear to popular violence and clamour; and he should proceed carefully to inquire, in the first instance, whether the death has been occasioned by an internal cause, by an external accidental cause, or by suicide. On each of these Dr. Beck has made some judicious remarks. Of the second he observes—

"There is a cause of sudden death, which is becoming quite frequent during our Summers, and which is altogether accidental. I refer to the drinking of cold water, when the body is heated from exercise. The person whose imprudence instigates him to this, generally falls down dead in a few moments. It is not to be supposed that any great change from the state of health will be observed on dissection, and we must therefore rely principally on the history of the case. It is to be regretted that examinations *post mortem* have not been made more frequently in these instances."

With regard to suicide, the whole previous history of the individual should be inquired into, and it should be noticed whether any of his relations have an interest in his death.

In the early part of this subject we have rules for the examination of dead bodies, principally extracted from the German work of Dr. Rose, the late work of Chaussier, reviewed in this Journal, being probably unknown to the Professor. Notes of the appearances should be made during the dissection, and

when it is finished "the notes should be taken and reduced to order, and in preparing the report, or in giving testimony, it should be as simple and as plain as possible, avoiding all those terms which are unintelligible to a court and jury."

We have next some interesting remarks on *ecchymosis*, *contusion*, *sugillation*, &c., with cases, but the latter, however useful, are not possessed of novelty, as they are from authors long published. Instead, therefore, of dwelling upon these, we shall extract our author's observations on the degree of putrefaction compatible with a proper dissection.

*Putrefaction*.—"Putrefaction," he informs us, "commences gradually when the vital principle is extinguished, and after a certain period, which however differs in different bodies, according to the previous diseases, the season of the year, its temperature, &c., it produces an extensive disorganization, confounding the cause of death, and rendering it dangerous for any one to examine the body. In such cases, it is evidently not the duty of the physician or surgeon to risk his life. Louis the XVth of France died from small-pox, and his body was purple and gangrenous with the disease. The chamberlain desired that, according to etiquette, La Martiniere, the first surgeon to the king, should open the body. This last, being aware of the danger, observed that he would perform his part, provided the chamberlain, according to the same etiquette, was present, and held the head of the deceased during the operation. He warned him, however, at the same time, that he could not answer for his life, if it was done. The chamberlain spoke no more of it, and the king was interred without any dissection. I mention this anecdote for the benefit of those who may be improperly urged by magistrates.

"After a certain period, then, it will be impossible to form a correct judgment on the state of the soft parts, nor ought any investigation to be permitted, since it can only lead to conjecture. There is however an exception, and that is, when wounds have been inflicted by fire-arms, or by an instrument which leaves them of a considerable size. The traces of these are generally so very distinct, as to be judged of on bodies for a considerable period after death. The blows of an axe, says Foderè, were very visible in one case, where the body had been buried thirty days. This subject, however, retained a more than ordinary degree of freshness.

"This difficulty respecting the soft part is of course obviated, when we examine the hard parts. A fracture may be as distinctly observed, and is as good proof, two months after death as one day, and this notwithstanding the putrefaction that may be present. A dead body was found in a field, in the *arrondissement* of Trevoux, during the month of May, 1811. The surgeon, deterred by the putrefactive smell, reported generally that he had discovered no marks of violence. Meanwhile, some ditchers, on interring the body, remarked that, on the fall of a handkerchief which covered the head, the



bones of the cranium detached themselves, and the brain issued out. The imperial attorney immediately ordered a special examination of the head, and it was found that this person had received three blows from a cutting instrument, which separated the parietal bones from the skull. The assassins, after committing the crime, had replaced them and secured them with a handkerchief bound very tight. They were afterwards discovered and punished."

The following, according to Boissieu, is the progress of putrefaction :—

" *First Degree.*—A tendency to putrefaction. It consists in a slight alteration of the body, a softness of the flesh, and a disagreeable odour. *Dissection is practicable and still useful.* And here let me remark, that all appearances, even those which are deemed certainly indicative of putrefaction, should be stated. They may prove the foundation of useful deductions.

" *Second Degree.*—Commencing putrefaction. A foetid odour is present, the fleshy parts become light, and assume a dark colour. *Dissection is already dangerous, and can be of no use except in particular cases.*

" *Third Degree.*—Advanced putrefaction. The parts exhale an ammoniacal odour, mixed with a putrid smell. They fall into dissolution, and their colour is constantly altering. *Dissection is impracticable and useless.*

" *Fourth Degree.*—Complete putrefaction. This is known by the complete dissipation of the ammoniacal odour, and also by the putrid smell losing its strength. The volume and weight of the parts is much diminished, and they separate into a gelatinous mucus, which gradually dries, and at last becomes an earthy and friable mass."

Of noxious exhalations as a cause of death, he justly observes, that none is more deleterious than carbonic acid gas. After remarking the state of parts on dissection, Dr. Beck adds—

"The peculiar appearances which I have described are important guides in determining the cause of death. Dissection should never be omitted in a case where there is the least uncertainty of its being an accident. The loss of irritability in the muscles is striking, greater from this cause of death, than is ever seen in cases from drowning, hanging, &c., and it is therefore worthy of particular attention. We should also notice whether no marks of injuries are present, which may excite doubt. The place, the circumstances under which the body is found, the noxious material that has been inhaled, all deserve investigation, and may lead to the truth."

"*Sulphuretted Hydrogen Gas.*—This is also a very powerful poison, even when much diluted with atmospheric air. But, in some instances, the smoke of a common coal fire, when diffused through a small room, may have disagreeable consequences. From the great debility we have experienced after sleeping in

in a room, we recommend to our readers to extinguish the fire before going to bed, if they should ever be so situated.

In considering the question, *whether an individual has hung himself, or been hung by others*, our author reports the two following cases, as deserving the attention of all medical men:—

“A young man, eighteen years of age, and named Bartholomew Pourpre, was found dead, and hanging to a tree, at seven o'clock in the evening of the 12th of August, 1736. A surgeon, who examined the body, certified that he had been strangled. His father had married a second wife, who was on very ill terms with the young man, and had produced frequent quarrels and threats of murder between them. Suspicion was therefore excited, but its probability was destroyed by the idea that a father would not murder his son, and also, from the circumstance that he was fifty-two years old, and his son eighteen, and in full health and vigour. On this reasoning, the father was acquitted, and the son was deemed to have hung himself.

“An order having, however, been made to prepare a statement of the suicide, and the cause being carried up to the parliament of Aix, the attorney-general discovered such facts in the statement of the surgeon, as led him to believe that Pourpre had not destroyed himself. It was mentioned not only by him, but by other witnesses, that the mark of the cord, instead of being at the upper part of the neck, was at its lower part, just above the shoulders; and secondly, that the teeth were knocked in, and bloody. The parliament, from these facts, decided that the father had strangled him, and had put his foot on the mouth of his son, either to prevent his cries, or to hurry on the strangulation. The suspension, they declared, was subsequent to his death. Whether the father was guilty or not, we must at least say with Foderè, that two facts are well established in this case: 1st, That the son had been strangled before being hung; and 2d, That the strangling had been done, not by himself, but by others.

“Marc Antoine Calas was the son of John Calas, a merchant of Toulouse, aged seventy years, of great probity, and a protestant. His son was twenty-eight years of age, of a robust habit, but melancholy turn of mind. He was student of law, and becoming irritated at the difficulties he experienced (in consequence of not being a catholic,) concerning his license, he resolved to hang himself. This he executed by fastening the cord to a billet of wood, placed on the folding doors which led from his father's shop to his store-room. Two hours after, he was found lifeless. The parents, unfortunately, removed the cord from the body, and never exhibited it to shew in what manner his death was accomplished. No examination was made—the people, stimulated by religious prejudice, carried the body to the town-house, where it was the next day examined by two medical men, who, without viewing the cord, or the place where the death had been consummated, declared that he had been

strangled. On the strength of this, the father was condemned by the parliament of Toulouse, in 1761, to be broken on the wheel. He expired with protestations to heaven of his innocence.

"Reflection, however, returned when it was too late. It was recollected, that the son had been of a melancholy turn of mind—that no noise had been heard in the house while the deed was doing—that his clothes were not in the least ruffled—that a single mark only was found from the cord, and which indicated suspension by suicide—and in addition to these, that the dress proper for the dead was found lying on the counter. Voltaire espoused the cause of the injured family, and attracted the eyes of all Europe to this judicial murder. The cause was carried up to the council of state, who, on the 9th of May, 1765, reversed the decree of the parliament, and vindicated the memory of John Calas."

We observe that Dr. Beck is sceptical on the subject of a person strangling himself; and in his opinion all such cases stand in need of the strongest evidence.

We wish we could insert the Professor's masterly investigation of the signs, and the whole evidence of drowning. Not one of them, he observes, when taken singly is perfectly satisfactory; but the sign of the greatest moment is undoubtedly the presence of frothy mucus in the trachea. On this subject several interesting cases are brought forward; and of these we shall extract an American one, as probably new to the generality of our readers.

"Levi Weeks was, on the 31st of March, 1800, put upon his trial, before the court of oyer and terminer, at New-York, for the murder of Gulielma Sands. The principal circumstances were as follow:—The deceased and the prisoner lodged in the house of Mr. Ring, who was a distant relative of the former. She received attentions from the prisoner, and told Mrs. Ring that she was to be married to him on Sunday, the 22d of December, 1799. When the evening arrived, she dressed herself, and came down into the lower room, where the prisoner was. Shortly after, she again went up stairs, whither Mrs. Ring followed her, saw her put on her hat and shawl, and take her muff in her hand. While in this state of preparation, Mrs. Ring came down stairs into the room, and found her husband and Levi sitting together. The latter instantly took his hat and went out into the entry, and the moment the door opened Mrs. Ring heard a walking on the stairs, and directly a whispering at the door. She soon heard them walking along, and presently the front door opened, and the latch fell. The time she accurately fixed at about ten minutes after eight. Weeks returned to his lodgings at Ring's at ten o'clock. Gulielma's body was found in the Manhattan well, on the 2d of January, 1800.

"As to the circumstantial evidence, I will only add the following:—It was proved by a witness, that Weeks had spent the evening

him from half-past eight until ten; and again it was testified, it took fifteen minutes to walk from Ring's to the well.

The medico-legal testimony was of the following import: The was carefully drawn up, so as not to touch either side of the. Her hat, handkerchief, and shoes were gone, and her clothes.

On the right hand there was something like a bruise, and were scratches of sand upon her skin, some of which was ked off, and seemed to have been driven forward. The right was bare, and somewhat scratched on its upper part, as if she been dragged on the ground. Her countenance was flushed, her arms and neck very limber. Drs. Prince and Mackintosh. ined the body before the coroner's jury, on the 3d January. It ascertained that she was not pregnant. The scarf-skin of the was scratched as if with gravel, and there was a bruise on the. There was a livid spot on the breast, but none on the neck. e body, a small quantity of water was discovered. Both these. emen deposed, that, in their opinion, all the appearances could counted for on the supposition of her having been drowned.

Dr. Hosack saw the body on the day it was interred. He was k with the unusual redness of the countenance, and upon look- t the neck, observed three or four dark-coloured spots, of an ular shape, but not in an exatt line. The largest were about ich and an half, and the smallest about three-quarters of an

He was decidedly of opinion that these were marks of vio- done to the neck, and did not conceive it possible that they have been committed on one's own person. Other witnesses lso observed these spots on the neck.

Towards the conclusion of the trial, Dr. Hosack was again l, and asked whether there was any explanation by which the al testimony, apparently so discordant, could be reconciled. plied, that it might, in either of two ways. First, the spots probably not so visible when the body was first taken out of the ; as after it had been exposed to the air for some days. The al progress of putrefaction might have developed this appear- in the injured part. Secondly, when she was first taken out of cell, it was generally supposed that the neck and collar-bone broken. As Dr. Hosack did not see her until the day of inter-, it is possible that the frequent turning and bending of the and the repeated examinations of the neck, to ascertain the y done to the collar-bone, might have produced the spots in ion; and as the body had been dead for several days, a little ace might have produced a rupture of the cutaneous vessels, consequent effusion under the skin.—The prisoner was ac- ed.

cannot avoid venturing a single remark on this case. The ner was doubtless innocent, but there are strong proofs to my that the deceased suffered violence, previous to falling or be- hrown into the well. The weather was undoubtedly cold (it luring the holidays), and the progress of putrefaction, during

immersion, must unquestionably have been very slow. The coroner's jury viewed the body on the day after it was drawn up. Dr. Hosack, and other witnesses, some time thereafter. Is it not probable that exposure to the air developed these marks of injury, and do not these marks indicate strangulation previous to immersion?"

The section on *persons found dead from wounds*, is illustrated by a great many important cases. On this subject, we cannot agree with Dr. Beck that it is impossible for an individual to wound himself in the spinal marrow, from behind.

Of persons found burnt to death we have spoken in our last Number; but we may remark here, that we cannot well doubt of spontaneous combustion having occasionally taken place.

*Wounds on the Living Body.*—This is a very valuable chapter. The author has left no source of information unvisited, and he has founded his rules concerning the mortality of wounds exclusively on anatomical and physiological data, which indeed in such cases should alone guide us, as instances of recovery from the most desperate wounds have been recorded. But on this subject, we can find room only for our author's note on wounds, received by intoxicated persons in drunken brawls. Should the wounded person die,

"The question," he observes, "frequently arises, whether the drunkenness or the blow has caused the loss of life. As a general rule, I would always lean towards the accused. The habitual use of spirituous liquors is so apt to produce a diseased state of the system generally, that unless positive malice be proved, we shall best promote the ends of justice by considering the offence as a secondary one. A case is related by Dr. Klapp, where an individual in Philadelphia, under such circumstances, died thirty-eight hours after the affray. He walked and spoke after it, and even drank part of a pint of spirits, but was shortly seized with insensibility, dilated pupils, oppressed breathing, and died without a return of sense. The bone and the brain beneath the injured part were examined, and found natural. The mucous membrane of the cardia and the upper part of the stomach, was greatly inflamed—the other parts were not diseased. Before the court, Drs. Hartshorn and Klapp gave it as their opinion, that the injury to the head had not been the cause of death, and that there was no appearance of blow, on or near the region of the stomach. I fully agree with the verdict of acquittal in this case, but I would suggest whether, in some cases of severe injury to the head, a similar appearance of the stomach may not be produced. I refer, for an elucidation of this idea, to Dr. John C. Warren's cases of apoplexy, with dissections in the New England Journal, Vol. I. p. 34. This anatomist has shown, that not unfrequently, a high degree of redness in the mucous coat of the stomach accompanies cerebral affection. Dr.

Klapp's cases are related in the American Medical Recorder, Vol. I. p. 156."

**Poisons.**—Our author next enters upon the subject of poisons; and, after considering the various definitions that have been given of them, he very justly observes:—"The great and leading object in medico-legal cases, necessary to complete the idea of a poison, is the intent with which the substance is given."

With regard, also, to the fatality of poisons, exceptions to general rules, which may depend on idiosyncrasy or habit, should be totally disregarded.

"And such extraordinary instances should, above all, never influence us in legal medicine, nor lead us to the idea, that because one person has taken a particular substance without any ill effects, it is, therefore, not a poison. The academy of Berlin was consulted, in 1752, whether copper was a poison. They replied, that they did not consider it decidedly so, since several had taken it with impunity, either separately, or mixed with food. Now, if this decision receives a general application, we may undoubtedly adduce examples of wonderful escapes from the effects of almost all noxious substances, and thus destroy the idea of poison altogether."

Foderè and Orfila are our author's chief guides. He first of all considers the signs of poison which has been given to a person in health, and next, those which manifest themselves in a person who has been for some time diseased. In the latter case, it is necessary to attend to the following particulars:—

1. "The sudden occurrence of symptoms which do not usually accompany the disease under which the patient labours. Thus, we should feel suspicious, if, in an ordinary case, nausea, vomiting, hiccup, faintings, cold sweats, with bloody stools, should suddenly and rapidly follow each other; or again, if stertor, delirium, or insanity should supervene on a case of common disease.

2. Moral circumstances. The physician should never allow these to prejudice his mind, but he should never neglect noticing them. Let him ascertain whether an enmity does not exist between the sick person and some one who attends or visits him; if so, inquire whether any poisonous substances have lately been purchased—whether these are still in the house—whether the alarming symptoms came on immediately after taking a drink, or any other substance of an innocent nature—and particularly ascertain whether any thing has been given without the orders of the physician, or by a person ignorant of medicaments."

There now follows a curious note on secret poisoning; after which we have a case from Morgagni, of the greater part of a dinner company being poisoned at the same time. It is worth extracting.

"In the month of May, 1711, four individuals, viz. a priest, two females, one of whom was his sister-in-law, and another person, all in good health, and on a journey, stopped at an inn to dine. They proceeded on their journey after taking this meal, but in a short time the priest was seized with such violent pain, as to oblige him to dismount from his horse. Copious evacuations by vomiting and stool succeeded, and his illness increased so rapidly, that it was found necessary to take him back to Cesenne, the place where they had dined. A physician was called in, who conceived the complaint to be only an ordinary choleric, treated it with fomentations, glysters, purgatives, and anodynes. During this time, one of the females was seized with severe pain and weakness, accompanied with copious evacuations. The fourth person of the party also complained of pain and weight of the stomach; but notwithstanding this, the physician had no suspicion of poison, since the other female was in perfect health, and the landlord protested that there could have been nothing noxious in his dishes. On the next day, they were all somewhat better, and were enabled to arrive at a place near where Morgagni resided, for whom they immediately sent. This great physician having learnt the circumstances, immediately inquired whether there was not some dish on the table of which the female in good health had not eaten. He was answered in the affirmative, and it was ascertained to have been a large dish of rice, served up at first. He settled in his own mind, that there were poisonous materials in this dish; but the difficulty was, why the priest who had eaten the least, should have suffered the most, while the female who had eaten a larger quantity was not so ill; and finally, that the fourth person, who had eaten more than all the rest, had only some pain in his stomach. Was there not, said Morgagni, some cheese grated over this rice? They answered in the affirmative, and the priest, who had little or no appetite, ate scarcely any thing but the cheese; the female ate both cheese and rice, while the other person ate the rice with scarcely any cheese. Then, said Morgagni, the state of the case is that the cheese was prepared with arsenic to kill rats, and not having been laid away with sufficient care, it was served up for your rice, while you were hurrying the landlord for your dinner. This opinion was verified by the confession of the landlord himself, who learning that the patients were out of danger, avowed that such was the cause of the accident."

Idiosyncrasy, indigestion, and sudden illness, may, on some occasions, be mistaken for the effects of poison.

In considering the *signs of poison on the dead body*, our author has pointed out many sources of error, and at the end of the case, in which an apothecary had incurred unjust blame, he makes the following observation:—

"This case teaches us a useful lesson in legal medicine, viz. that the fluids and solids may be coloured by various alimentary sub-

stances or medicaments, if their use be long persisted in: and it also gives a caution, not to depend too much on a single phenomenon, but to view all the known facts in connexion, and then deduce a judgment from them."

It is the state of the stomach, however, which is most likely to mislead us; by its *vascularity*, by its *spontaneous digestion*, and occasionally by its *rupture*. All these our author has handled in an able manner; and with regard to the second, has remarked, that in the present state of our knowledge, "*erosion distinct from inflammation*, should not be regarded as a positive proof of poison."

**Arsenic.**—The first poison which Dr. Beck has examined is arsenic, the deadliest of all the poisons, and the one most frequently employed for destructive purposes. Its internal or external application will produce death. It is used, however, as a medical remedy in both ways.

"There can be no doubt, that the various quack preparations used both in England, France, and this country, for the cure of cancer, and which have arsenic for their base, have, in most cases, proved destructive to the patients. Certainly governments ought to interdict their application, except in the hands of regular practitioners.

"In France, the *pate arsenicale* is used. It consists of cinnabar 70 parts, sanguis draconis 22, and arsenious acid 8, made into paste at the time of applying it. In England, *Plunkett's ointment*, made of arsenious acid, sulphur, and the powdered leaves of the *ranunculus flammula* and *cotula foetida*; and *Davidson's remedy for Cancer*—arsenious acid and powdered hemlock (Paris' Pharmacologia, p. 209.) In the United States, *Davison's Cancer plaster*—some preparation of arsenic. As far back as the time of Haller, cases are related of death ensuing from the external application of arsenic to cancers and ill-conditioned ulcers. (Edinburgh Med. and Surg. Journal, Vol. XIV. p. 643.) Dr. Francis mentions a case, where an ointment containing arsenic was applied to a tumour. Paralysis shortly followed; every joint seemed to be enlarged and tumid; the intellectual functions were nearly destroyed, and death ensued suddenly and unexpectedly.—New-York Med. and Phys. Journal, Vol. II. p. 28."

It would be a waste of time to enter upon the symptoms produced by this poison, or upon the *post mortem* appearances, as they are now-a-days familiar to the greater number of practitioners. Neither is it necessary that its tests should detain us long. Every one of them is liable to error; but perhaps the nitrate of silver is the least so.

"This," says Dr. Beck, "is evidently a convenient and striking test, but it is to be regretted that its utility is impaired by many serious objections. It has been attempted from time to time to ob-



viate these, and to render the proof infallible, but not with perfect success. As the progress of improvement with respect to it is curious, and particularly as it behoves every medical jurist thoroughly to understand this subject, I shall state the various modifications in their order.

" 1. It is evident that cases of poisoning occur more frequently from arsenious acid simply, than from arsenite of potash (Fowler's solution); and hence the test should be applicable to a solution of the former substance. Now, according to Dr. Marcet, arsenious acid alone will not decompose the nitrate of silver, while it is well known that the pure fixed alkalis produce that effect. To avoid the confusion which might arise from the latter circumstance, Dr. Marcet suggested the superior advantages that would attend the use of ammonia. *This alkali, when added singly, does not decompose the nitrate of silver.*

" The following mode of applying the test, thus modified, has been published by Dr. Roget, as the direction of Dr. Marcet: ' Let the fluid suspected to contain arsenic be filtered; let the end of a glass rod, wetted with a solution of pure ammonia, be brought into contact with this fluid, and let a clean rod, similarly wetted with a solution of nitrate of silver, be brought into contact with the mixture. If the minutest quantity of arsenic be present, a precipitate, of a bright yellow colour, will appear at the point of contact, and will readily subside at the bottom of the vessel.' This was so efficient as to shew the presence of arsenic when the fluid examined contained only the two hundred and fifty thousandth part of a grain.

" A student at Guy's Hospital suggested to Dr. Marcet, that when nitrate of silver is added to a solution containing an alkaline phosphate, a yellow precipitate is thrown down, similar in appearance to arsenite of silver: hence an ambiguity might readily occur in suspected cases, as an alkaline phosphate might be present in fluids of the stomach. This fact induced Dr. Marcet to examine the subject anew. He found the shades of colour in the two salts quite alike, yet sufficiently resembling each other, to render the a dubious one in judicial cases. Mr. Richard Philips made several experiments on it, and repeatedly obtained, without any regard to proportions in either case, precipitates of arsenite and phosphate of silver, resembling each other so perfectly, that it was impracticable to distinguish them.

" In order to obviate the difficulty thus discovered, and still render the test available, Dr. Paris proposes the following method: ' Instead of conducting the experiment in glasses, drop the suspected liquor on a piece of white paper, making a broad line with it. Along this line, a stick of lunar caustic is to be slowly drawn, when a streak is produced of a colour resembling that known by the name of *Indian Yellow*; and this is alike obtained by the presence of arsenic and of phosphoric salts; but the one from arsenic is more curdy, and flocculent, as if effected by a crayon; that from a phosphate, homogeneous and uniform, resembling a water colour —

othly on with a brush. A more important and distinctive peculiarity soon succeeds; for in less than two minutes the phosphoric colour fades into a *sad* green, and becomes gradually darker, and *notably* quite black; while, on the other hand, the arsenical yellow remains permanent, or nearly so, for some time, when it becomes brown. In performing this experiment, the sunshine should be avoided, or the transition of the colour will take place too rapidly.' Mr. Thomson observes, that this result will be rendered more satisfactory, by brushing the streak lightly over with liquid ammonia immediately after the application of the caustic, when if arsenic be present, a bright queen's yellow is produced, which remains permanent for nearly an hour; but that when the lunar caustic produces a white-yellow before the arsenic is applied, we may infer the presence of some alkaline phosphate, rather than that of arsenic.

Mr. Hume has, however, formed a triple compound, the *ammonio-nitrate of silver*, which obviates two difficulties, and it is therefore a valuable addition to our means of analysis. It avoids the danger of an excess of ammonia, which might re-dissolve the yellow precipitate, and it does not affect in the least the phosphate of arsenic. The following is the formula for its preparation:—"Dissolve ten grains of lunar caustic in ten times its weight of distilled water; to this add *guttatim*, liquid ammonia, until a precipitate is formed; continue cautiously to add the ammonia; repeatedly agitate the mixture, until the precipitate is nearly re-dissolved." The object of allowing a small portion to remain undissolved, is to guard against an excess of ammonia. Whenever the test is used, the fluid to which it is added ought to be quite cold.

Dr. Paris mentions another objection to the use of the nitrate of silver, which is, that it produces such copious and flocculent precipitates with the muriates, as to overcome every indication which the presence of arsenic would otherwise afford. Dr. Marcet proposes to obviate this difficulty by adding diluted nitric acid to the fluid, and then cautiously apply the nitrate of silver until the precipitation ceases. In this way, the muriate of silver, which is insoluble, immediately resumes its peculiar density and whiteness, while the arsenic, if it be present, will remain in solution, and may be rendered evident by the affusion of ammonia, which will instantly produce the yellow precipitate in its characteristic form. Dr. Paris objects to this, that the yellow precipitate thus produced, is not permanent, since it is soluble in the nitrate of ammonia, formed during the process; and he recommends that we should employ the nitrate of silver its full power of precipitation, and then submit the mixed precipitate to a low heat in a glass tube, when arsenious acid will be immediately separated by sublimation. He recommends this process also in cases where animal and vegetable substances, as milk, broth, or wine, are mixed with the suspected fluid. Of this, however, I shall speak hereafter.

4. The last objection to the correctness of this test has been al-

ready noticed, as occurring on a trial for poisoning. A decoction of onions, however, when treated with the ammoniaco-nitrate of silver, presents no *precipitate*, and the colour, which at first is a reddish yellow, gradually changes to a deep red. But the same objections which I mentioned when noticing the ammoniaco-sulphate of copper, are also urged against the infallibility of this result.

"I am apprehensive that all these objections go far to weaken the value of the test under notice. But I would, notwithstanding, always have it applied in the form of ammoniaco-nitrate of silver, and principally for this reason, that it will furnish us with a copious precipitate, ready for any further experiments that we may require to perform."

The above will afford a favourable specimen of our author's industry, and of the judgment with which he selects every thing that may benefit his subject. As no less worthy of observation, we cannot help quoting his account of the *reduction of arsenic with the black flux*.

"Take," says he, "any of the precipitates produced by either of the foregoing tests, and evaporate it to dryness with a gentle heat, or take the suspected powder, if it has been found in a solid state, and 'mix a portion with three times its weight of *black flux* (consisting of finely powdered charcoal one part, and dry carbonate of potash two parts), put the mixture into a thin glass tube hermetically closed at one end, about eight inches in length, and one-fourth of an inch in diameter. Should any of the powder adhere to the sides of the tube, it must be carefully brushed off with a feather, so that the inner surface of its upper part may be perfectly clean and dry. The closed end of the tube, by way of security, may be thinly coated with a mixture of pipe-clay and sand, but this operation is not absolutely necessary, and the open extremity is to be loosely plugged with a piece of paper.' The coated end is now to be heated on a chafing-dish of red-hot coals; or, it may be heated red-hot in the flame of a spirit lamp; or we may urge it with the blow-pipe until it comes to that state. In either case, if arsenic be present, it will sublime, and form a brilliant metallic crust, resembling steel, and lining the upper part of the tube.

"This mode of proving the presence of arsenic is undoubtedly most decisive and satisfactory, and it is therefore of great importance that no imperfection should attend it.

"In the first place, it should never be attempted on a suspected substance, unless the operator has previously performed repeatedly on what he knows to be arsenic. He should be familiar with the appearance of this metal in very minute quantities. Dr. Paris observes, that, to his knowledge, it has happened to a medical person, by no means deficient in chemical address, to ascribe to the presence of arsenic that which was no other than a film of very finely divided charcoal. This advice then, which applies to all chemical proofs, is emphatically important in the present instance.

"2d, I should next recommend, when the suspected substance is small, that this experiment be not attempted, until the operator has applied all the tests he intends to use. Let the precipitates then be investigated in this way. The reasons why we should prefer this are, that the tube may break during its heating, and we may lose a part or the whole of the arsenic; while, on the other hand, the bulk of the precipitates will increase the facility of examination. But, above all, I should enforce this direction from the simple fact, that the reduction of the metal in this way, is not alone a sufficient proof. I put this observation in strong language, that I may be distinctly understood; and I ask those chemists, who of late years have agitated the community with their denunciations against tests, whether they intend that the *steel lusted coating* of metallic arsenic, developed by the above process, is of itself sufficient to prove a criminal guilty? The language used in their writings would certainly warrant such a deduction. But the truth, I apprehend, is (and it has not been explained with sufficient explicitness), that the reduction of the metal is the *confirmatory*, the *decisive* proof; because the previous experiments with tests have indicated the presence of poison, and they should therefore precede its use.

"3d, Dr. Bostock remarks, that powdered charcoal added to the arsenic will answer every purpose required in this process. This, however, is probably incorrect. The presence of potash in the flux would seem to be very essential, since it immediately forms an *arsenite of potash*, and thereby fixes the arsenious acid, and prevents it from being volatilized before the temperature is sufficiently high to enable the charcoal to decompose it.

"4th, As to the minuteness of this proof, Dr. Bostock observes, that when less than three-fourths of a grain was employed, the metallic coating was not clearly perceptible; and, from a remark of Dr. Black, he concludes that that chemist considered one grain as the smallest quantity which he thought capable of detection by this process. Later experimenters, however, assert that they have obtained satisfactory results with smaller quantities. Rose states, that he was able to detect in this way the one-eighth of a grain, mixed with animal matters. And Dr. Gorham, of Harvard University, obtained a distinct metallic film from one-eighth of a grain."

After presenting us with a tabular view of the effects of tests on various mixtures of arsenic with animal and vegetable substances, the Professor makes the following remarks:—

"I should not be doing justice to the student in medical jurisprudence, were I to dismiss the subject at this place. There remains a question of magnitude to be discussed; which is, *the degree of proof necessary to determine the fact that poison has been administered?* The chemist will reply, that the reduction of the metal is the only certain and decisive evidence. I answer, it is the *HIGHEST POSSIBLE* proof, but it cannot always be obtained. Are we then, in all cases of indictment, to acquit the prisoner because this has not been accomplished? This would certainly seem to be the bear-

ing of some late observations, but I cannot persuade myself of its justice, nor of its conformity to the rules of criminal evidence.

"The proofs of the administration of poison are threefold: the symptoms, the appearance on dissection, and the results obtained by chemical experiments. The first are undoubtedly equivocal, they often accompany other diseases in a greater or less degree, and again they vary materially in individual cases. Hence the inference derived from them can only be partial, and must be supported by further proof. So also with morbid appearances. We have already shown, in a previous page, what difficulties envelope this point. I do not desire to conceal either of these, but, notwithstanding, wish to contend, that there may be cases, in which the MEDICAL JURIST (not the *chemist*,) would be justified in pronouncing that poison had been the cause of death."

The discussion is concluded with the narrative of some cases which have come before the criminal courts; particularly those of Miss Blandy, of Nairn and Ogilvie, of Miss Burns, and of Kesler.

"In consequence," says Dr. Beck, "of the circumstances attending the death of Miss Burns, Mr. Angus was indicted for her murder; and, on the trial, Dr. Carson, of Liverpool, appeared as a witness for the prisoner. He objected to the conclusiveness of the proof, both as to symptoms, and as to the appearances on dissection.

"As to the *symptoms*, he urged that their general mildness showed that she had not been poisoned. This, however, is merely a gratuitous assertion. Death ensued in this case after an illness of only *fifty hours*, and it certainly requires a full share of hardihood to say that a mild disease would produce this. He also observed, that, from all he had read of mineral poisons, he was led to believe that convulsions have always preceded death. Here he is no less mistaken. Convulsions and delirium, which he afterwards noticed, are both uncommon attendants on the exhibition of this class of poisons.

"As to the *appearances on dissection*, he remarked that the bodies of persons killed by poison, run rapidly into putrefaction, and as this did not occur in the present case, so it was a proof in favour of the accused. I have shown in a previous page, from facts quoted in the notice of the trial, and from other sources, that this is a totally incorrect opinion.

"The state of the stomach and its erosion, he explained, by referring to Mr. Hunter's paper in the action of the gastric juice. As I have already enlarged on this point, I will not repeat the arguments used; but I may add, that the medical witness for the crown urged against its probability the fact, that none of the neighbouring viscera were acted upon by this fluid. They also suggested that during the illness of Miss Burns, the larger quantity of fluid which she drank, and which was immediately rejected by vomiting,

it have carried off the gastric juice nearly as fast as it was secreted, and the quantity of fluid found in her stomach must have diluted and weakened the gastric juice remaining, as to render it equal to dissolve the stomach itself after death. The injury was in the lowest and most depending part, but in the anterior part be large curvature. Lastly, the action of the gastric juice afforded no explanation of the inflammation in the duodenum, small intestines, liver, or fundus uteri.

The *chemical proofs* of poisoning were wanting in this case, but the *remark* of the witnesses on this is founded in truth. 'We are always, say they, to infer that poison has not been administered, because it could not be detected in the contents of the stomach after death.'

Wesler, an American, was tried in 1817, for poisoning his wife, and after a very full investigation he was condemned and executed. In this case, however, the arsenic was not produced in its metallic state; and in consequence, a controversy was excited among the medical people of America.

I do not intend," says our author, "to offer many remarks on this case, but I may be permitted to say, that while I deeply regret that the reduction of the metal was not effected, yet the results obtained from the tests used, present to my mind a very strong chain of evidence against the accused. I am acquainted with facts, that exertions were fruitlessly made to procure the proper apparatus for the reduction, and therefore the invidious sneers that appeared concerning the ignorance of the witnesses, might have been spared. But I will not enter into this controversy. M'Neven viewed the subject as a chemist. I wish to consider so far as the distinction is allowable) as a medical jurist, and I present it to those who are desirous of examination, in the following point of view. What substance is there, that will lie undiscovered for two months in the stomach of a diseased person, and on several trials, will give, in a fluid state, a yellow precipitate with Wetzlar's test, and although turbid, will present a dark green with Scheele's? These results must be taken *unitedly*, and not *separately*. It is certainly no answer, that the oxyde of tin will produce one, and a decoction of onions the other. In order to render it properly available, it should have been proved that they had been administered during the illness of the female. The probability at present is decidedly against it. Scheele's green also is a sufficient preventive of mistake as to phosphoric salts.

Again, are not the symptoms strongly corroborative? The administration of a substance which produced violent vomiting, and she was convalescing, and the repeated exhibition of this medicine after its attendant train of consequences, with his falsehood respecting the attendance of a physician, certainly indicate a determination to destroy the health, if not the life, of the individual. What is there in his favour? *Is it to be found in his offers to another*

female while his wife was living, or in his wishes that she was out of the land of the living, or in his often repeated determinations that he would never live with her? And yet this is a man whose condemnation, according to Dr. Cooper, is "not creditable either to the chemical knowledge of the physicians, whose evidence influenced his condemnation, or to the jurisprudence of the state which directed his execution." This is the man, of whose trial he has said, "no lawyer can find any positive, and no chemist any probable proof of guilt." This is the man on whom he has rung changes in the *Democrat Press*, before the *American Philosophical Society*, and in the preface and in the appendix of his *Tracts on Medical Jurisprudence*. Dr. McNeven asserted that the reduction of the metal was alone to be depended on. He said so, and he maintained it manfully. Dr. Cooper came forward as his champion and friend, quotes long extracts from papers familiar to every student in chemistry; and when we were looking for new arguments and new proofs in favour of Dr. McNeven's assertion, what does he present us with? A NEW TEST—a test, which from its very application, must be productive of uncertainty, a test, which the only experimenter, that has subsequently examined it, finds Protean in its character and the results concerning which are diametrically opposite to those stated by Dr. Cooper himself."

**Mercury.**—Poisoning by mercury is next treated of in the same careful manner, though on a more limited scale. The result of the whole is, that the reduction of the metal is the only infallible proof of its having been administered.

That antimony in some of its preparations is a virulent poison has been long known; and even when employed externally, in large quantities in the form of the tartar emetic ointment, it will produce injurious effects.

"Dr. Francis states, that in two cases where tartar emetic was used externally, in the form of ointment, for a longer time than was proper, the effects upon the constitution of the patient were similar to those at times arising from arsenic employed in the same manner; a comatose state, feeble pulse, inability to muscular exertion, and enlargement of the smaller joints. These consequences continued several months."

The preparations of copper, zinc, tin, silver, and gold, are next investigated. Nitro-muriate of gold is a strong poison.

"We have no cases on record," says our author, "of poisoning by this salt; but it is evident, from the preceding observations, and also from its effects as an article of the *materia medica*, that it exercises a powerful action on the human system. It has come within my observation, to have seen a case of dropsy removed by its use in a very short time."

Of platina, bismuth, iron, lead, it will not be necessary to say much. The acetate of lead seems to poison by producing

gastric inflammation, costiveness, cold and clammy sweats, and trismus. In one case death ensued in three days. We, however, have information of a soldier affected with ophthalmia, who took a drachm of it in a mistake for compound powder of jalap. It purged and sweated him severely; and his ophthalmia was cured. It was followed by no bad effect, but we by no means recommend the practice. Dr. Beck has known an instance nearly of the same kind.

He has made a practical remark on this medicine, which deserves to be extracted.

"I have too often witnessed," he says, "the value and efficacy of acetate of lead in pulmonary and uterine hæmorrhages, not to feel a great partiality for it as an astringent medicine. I know of nothing that can be substituted, in extreme cases. But I must stop here, and unequivocally condemn the practice which has occasionally obtained of late years, of administering this salt in diarrhœa. It is not necessary at this time to point out the reasons why it must prove injurious: it is sufficient to say, that death, preceded by all the symptoms of acute poisoning has been the consequence of its exhibition. We have the authority of my friend Dr. Mann, late hospital surgeon in the United States army, in asserting, that during the war of 1812, several officers of rank fell victims to its use."

After saying a few words on phosphorus, the Professor enters into a long, perhaps a too long, examination of the acids, particularly the sulphuric. In a case of poisoning by this article, we remarked a loud croaking, which seemed to pervade every part of the alimentary canal; but the patient had been some hours under the influence of the poison without any remedy having been employed to remove it: he died.

The carbonated alkalies, barytes and its salts, and the nitrate of potash are next attended to; and then we have some remarks on the gases. Chlorine, in a gaseous state, destroys those who breath it.

"In the Summer of 1821, Dr. Francis was called to a child aged seven years, who had, through accident, inhaled a portion of this gas from a bottle. The action of this substance was most sudden, immediate congestion of the bronchiæ and lungs, a laboured cough, and appearance of unavoidable suffocation. The patient was forthwith removed into the open air, and blood taken from the arm. These means were followed by the mechanical elevation and depression of the ribs, as in giving action to the chest in cases of asphyxia. Considerable irritation of the lungs continued for several days after the child's recovery."

The author now concludes the subject of the mineral poisons with a statement of some general results drawn from experi-



ments made upon them. These cannot fail to be of service to the medical jurist; but being taken from Orfila, they are not possessed of novelty.

Dr. Beck does not treat of *vegetable poisons* at great length because they are seldom the instruments of murder. He follows the arrangement of Orfila. It would take up too much room to enumerate them all; we shall therefore merely note a few of them in passing.

Dr. Bigelow has known individuals badly poisoned in Winter from the wood of the *rhus vernix* being accidentally burnt in the fire.

*Chelidonium majus* and *glaucium*, (celandine) are both poisonous, and the latter produced delirium and purging in a family who ate of a pie into which some of it had been put by mistake.

*Scilla maritima* is ranked by Orfila among the poisons. We have known a scruple of the powder occasion severe vomiting and purging, but with an astonishing alleviation of hydroptic symptoms.

"*Lobelia inflata*. (Indian tobacco. Emetic weed. Eye-bright.) A native of the United States. This is a powerful emetic, and distressing and long-continued sickness often accompanies its operation. A melancholy instance of death, occasioned by the use of this plant, in the hands of a quack, is detailed in the sixth volume of the Massachusetts Reports, in the trial of Samuel Thompson, an empiric, practising in Beverly, for the murder of Ezra Lovett. In this trial, it appeared that the patient, being confined by a cold, sent for the pretended physician, who gave him three powders of lobelia in the course of half an hour, each of which vomited him violently, and left him in a great perspiration during the night. The next day two or more powders were administered, each of which operated by vomiting, and occasioned great distress. In like manner, two other powders were given the subsequent day, leaving the patient in a state of great prostration. Several days after this, the physician came again, and finding his patient still worse, administered several more powders, which occasioned great distress, and at length ceased to operate. Finding that the stomach was not sensible to the emetic effect of the lobelia, the physician repeated the dose, and when the patient complained of great distress at the breast, and said he was dying, the doctor assured him the medicine would soon get down, or operate as a cathartic. However, on the same evening, the patient lost his reason, and became convulsed, so that two men were required to hold him. To relieve which, the doctor forced down two more of his powders, and the patient, as was to be expected, grew worse, and continued so until he expired.

"The doctor, who had thus terminated the disease and the pa-

cient at once, was arrested and put upon trial for murder ; but the homicide proving a legitimate one, from the want of a sufficient evidence of malice prepense, he was acquitted and set at liberty."

Dr. Beck does not seem to be an admirer of the celebrated *croton tiglium*.

"The seeds of this plant have an acrid, nauseous, and burning taste. They were formerly employed as a hydragogue purgative, but on account of the violence of their operation, were completely laid aside. One seed is sufficient for a dose, and even this sometimes excites violent purging and vomiting.

"Within a few years past the expressed oil of this plant has come into considerable use as an article of *materia medica*. From one to three drops is a dose, and tremors and delirium have been known to occur in a male patient from a dose of two drops.

"*Oil of Tansy*. Dr. Francis mentions that a pregnant female lost her life in 1816, at New York, from taking half an ounce of it. Great pain and anxiety about the epigastrium were experienced until her death, which happened within a few hours."

Dr. Beck also says, that a tea spoonful and a half of it threw a woman into convulsions, and occasioned her death in two hours.

After speaking of the oxalic acid, as a vegetable product, Dr. Beck adds: in cases where this article has been swallowed in considerable quantity, death is generally so sudden, that but very little can be done.

"Mr. Thomson recommends a mixture of chalk and water to be given as soon as possible. Oxalate of lime will thus be formed in the stomach. Magnesia may also be advisable. The alkalies should not be given, as Christison and Coindet found death to follow in animals from the exhibition of the oxalates of potash and ammonia, in a few minutes.

"Should the patient be so fortunate as to recover from the immediate effects, it will be advisable to employ stimulants, as brandy, friction, and hot fomentations.

"It has been supposed that *tartaric* and *citric acids*, in large quantities, would act in a similar manner on the human system.

Among the narcotic poisons, opium holds a high rank, and Dr. Beck has considered it with attention. In doing this he justly reprobates the administering of it to children of a tender age.

Under the head of hydrocyanic acid, we have a curious abstract of the trial of Captain Donellan for the murder by poison of Sir Theodosius Boughton his brother-in-law. We extract a few of our author's remarks on this case.

"It was," he says, "and still is, a prevailing opinion with many, that Sir Theodosius Boughton was not poisoned, and that

Captain Donellan was innocent. Dr. Male notices this case, as 'a melancholy and striking instance of the unhappy effects of popular prejudice, and the fatal consequences of medical ignorance.' Mr. Phillips, in his 'Theory of Presumptive Proof,' adduces it as an instance where a man was unwarrantably condemned on circumstantial evidence.

"I cannot agree with either of these gentlemen, although I will readily allow that too much dependence was placed on the appearances found on dissection. Putrefaction was evidently too far advanced to render them a certain ground of testimony.

"As a medical man, it might be inquired of Dr. Male, whether the symptoms preceding this death have not been most strikingly and astonishingly verified, as probably originating from laurel water, by the subsequent investigations of chemists and physicians. Mr. Hunter in his testimony says, that he had never known laurel water to act so rapidly as the other medical witnesses described. He had injected it into the veins and into the stomach of animals, *but it never produced so quick an effect.* Who, I would ask Dr. Male, have subsequent experiments proved to be right on this point? Mr. Hunter, or the other witnesses. Let the facts I have adduced in previous pages answer this question.

"Again, Mr. Phillips and others object greatly, that the whole proof of its being laurel water rested upon the comparison of the smell. Now I conceive this to be a very satisfactory circumstance. The medicine administered by Mr. Powell did not contain laurel water—while few, very few indeed, of the fluids in common use, possess a smell at all resembling that of bitter almonds. This property is peculiar—confined to a certain number of vegetable products, several of which, even at that day, were known to be deleterious.

"Capt. Donellan had a still in his own room—there were laurels and bays in the garden. (see Amos' testimony.) This is a sufficient answer to Mr. Phillips' question, *where did the prisoner procure it?* Certainly, if there was an intention on the part of Captain Donellan to use the laurel water for the purpose of poisoning, we have shown *how he could obtain it.*

"I have made these few remarks on this case, not for the purpose of asserting positively that Sir Theodosius Boughton was poisoned, but to state a few circumstances, which tend to shew that this was not an instance of *judicial murder*, for such I apprehend it must be considered by the critics on it."

Dr. Beck has also given the whole of the celebrated John Hunter's evidence on this trial; and it is a curious instance of the union of ignorance and knowledge. Datura, stramonium, digitalis, cicuta, &c. poisonous mushrooms, alcohol, spurred rye, and the various vegetable poisons of the Indians are next the subject of investigation. Then follow some curious cases and observations on animal poisons; and on the inoculation into the

System of a septic principle, by a wound, during the dissection of dead bodies.

"A friend of mine," says Dr. Beck, "punctured his finger with a needle, while examining the body of a child. In forty-eight hours afterwards, acute, lancinating pains were felt in the wound, and it assumed a deep purple colour. The arm itself, and the glands of the axilla, also became affected, and were exquisitely painful. A general disturbance of the nervous system soon succeeded, and he was only relieved by a strict adherence to the antiphlogistic treatment.

"These cases are sufficient to show the danger that sometimes follows from a puncture during dissection. Whether this danger is aggravated by a peculiar condition of the system, is in some degree still undetermined; but it is not improbable that the effects may be exacerbated in cases where there is no previous predisposition to disease, either of a temporary or constitutional nature."

We thus finish our review of this standard work; a work which is in every respect honourable to its learned and industrious author. It is in a great measure a compilation, but a most judicious one, and one in which every authority is given with the most scrupulous exactness. Indeed, in our opinion, the greatest charm of the work consists in the references to other authors; yet it is of itself so full, so accurate and interesting, that it renders almost every other book on Medical Jurisprudence superfluous. Its style is simple and unadorned, in general correct, and in no instance, so far as we have been able to discover, obscure. We may add, that, even setting aside Medical Jurisprudence, it is a work of great practical utility, and of interest to the general reader.

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ART. IV. *Recherches Nouvelles et Observations Pratiques sur le Croup, et sur la Coqueluche; suivies de Considerations sur plusieurs Maladies de la poitrine et du conduit, de la respiration dans l'Enfance et dans la jeunesse; par THEODORE GUIBERT, M.D. &c. &c. 8vo. pp. 336. Paris, 1824.*

One might suppose, from the numerous works which have long ago appeared upon the subject of Croup and Hooping-cough, that there was little occasion for a new Treatise on these diseases. To write, however, from time to time, on individual diseases, we think an extremely useful practice; and the physician who does so deserves praise, should he even do nothing more than collect the facts and observations which are scattered

over the journals and transactions of the Profession. But M. Guibert had a higher aim; he gives the result of his own observations, and a statement of dissections which have been made under his own eye. In so far the work is original and valuable.

He was led, he informs us, to write upon these subjects, from observing that physicians differ much in their treatment of croup and hooping-cough, and often confound them with diseases to which they have but a very slight resemblance. He has, therefore, attempted in the present Treatise to establish more correct diagnosis of the two diseases, and to introduce more rational and a surer practice.

*Croup.*—In commencing his account of croup, M. Guibert gives the synonymes of authors, and then affirms that it is essentially and primitively an inflammatory disease; rejecting as an absurdity a purely nervous croup unattended by inflammation. Though never contagious, it has appeared epidemically in some countries; and in particular parts of Sweden and Scotland it is endemic. It is a disease of infancy, though it has been known to attack adults; but in that case, as we have had occasion to observe, there is a considerable intermixture of spasms with the inflammatory symptoms, and it is a milder disease than the infantile croup.

"Various anatomical and physiological circumstances," says the author, "concur in rendering the croup more frequent in infancy, and in giving it its distinguishing characteristics. The principal of these are—1st, The straitness of the windpipe, and particularly of the glottis; 2d, The great sensibility of the mucous system in general, of which sensibility the membrane lining the respiratory passages has its full share; 3d, The extreme difficulty of expectoration at this age, a circumstance which favours the accumulation of mucus in the wind-pipe, and consequently the obstruction of the bronchial ramifications; 4th, The activity of the circulation, which explains the ready occurrence of inflammations at this period of life, as well as the intensity of their symptoms and the rapidity of their progress; 5th, The abundance of matters furnished by the secretions and exhalations, particularly those of the cutaneous and pulmonary transpirations, and of the mucous secretions of the air passages; 6th, The close sympathy which unites these latter functions, a sympathy which enables them mutually to supply each other, and which occasions the increase of action in the one, when the activity of the other is diminished; 7th, The fineness and softness of the skin's texture, the light clothing worn by children, their imprudence in exposing themselves to cold when they are sweating profusely, and in becoming suddenly inactive after the most violent exercise."

—p. 7.

We need not follow our author in his enumeration of the causes which predispose to, or produce croup; but we may ob-

serve, that it is not unfrequently a sequel of diseases which affect the throat and the parts connected with it. Neither need we copy his very correct picture of the disease, which he has divided, as is usually done, into three periods; the first, or that of *irritation*; the second, of the *albuminous secretion*; and the third, of *suffocation* or of *debility*.

"But the croup," he observes, "does not always proceed in one uniform course. There is often an exacerbation of the symptoms towards evening, or in the night-time. The voice, then, is much altered; the breathing is more difficult; the cough more frequent and more painful. The pulse becomes quick and irregular; the face swells, and assumes a livid tint; and the heart and arteries beat with increased vigour. The patient sweats, tosses up and down, and suffers extreme anguish. The pain of the larynx and trachea is more acute, inspiration is more noisy, and expiration more difficult. Sometimes the bladder and rectum discharge their contents involuntarily. But at the moment when the child's death appears to be inevitable, the violence of every symptom is lessened, and the *remission* takes place."—p. 15.

The characteristic phenomena of the croup are next enumerated by our author in the following manner:—1. The alteration of the voice; 2. The peculiarity of the cough; 3. The expulsion by the mouth of mucous matters, or of concretions, bearing the form of membranes; 4. The difficulty of breathing; 5. Pain in the region of the neck; and, 6. Fever. There are several other phenomena, which may be named *accessory*.

The real nature of the croup is best elucidated by the dissection of the diseased parts after death. The appearances then detected are the following:—1. The redness of the mucous membrane lining the air passages. This appearance is never wanting, though sometimes it is only partial. 2. Mucous or viscous matters, which may be drawn out into threads. These are found oftenest in the bronchia, which they sometimes almost totally choke up; but often they are also observed in the trachea and sinuses of the larynx. 3. Concretions resembling membranes, or albuminous incrustations.

"These concretions very much resemble those which are produced on the surface of inflamed serous membranes. Their presence affords one of the most decisive marks of croup, whether they are observed upon opening the body after death, or during life, when they are coughed up by the patient; yet they are not always present. Their thickness is very various; but it is more considerable in the larynx and trachea than in the bronchia. Their form also varies; sometimes they constitute a tube bearing an exact resemblance to the wind-pipe, upon which they appear to have been moulded; sometimes they form portions only of a tube, or mere circles or plates; or they may have no particular conformation,

" Sometimes the false membranes extend as far as the epiglottis, or even line a part of the pharynx, or back part of the mouth. It is these concretions which, by contracting the wind-pipe, and rendering the passage of the air difficult, occasion suffocations, and contribute in every case to impede respiration.

" The membranous concoctions have different degrees of consistence and tenacity. They are softer, in proportion as they are farther removed from the larynx, and descend into the bronchia. Sometimes they adhere closely to the mucous membrane of the wind-pipe, and it is then no easy matter to remove them. In some cases, these false membranes put on an appearance of organization, and in their substance shew even blood-vessels, which seem to be produced by the elongation of those which are distributed to the mucous membrane."—p. 21-23.

M. Guibert now favours us with a theory of the production of these membranes, and says a few words on their chemical characteristics. † They are formed of albumen. In some cases ulcerations and gangrenous spots are observed upon the membrane of the air passages. The adjacent parts also are commonly in a state of inflammation, and the lungs are frequently diseased. In most cases also, the vessels of the brain are distended with much blood.

We think it quite unnecessary to state, with the author, the ways in which the croup terminates, or to mention all the diseases which sometimes come after it.

" I have often," he says, " observed gastritis and enteritis follow croup; and this, in some instances, has been occasioned by the use of irritating medicines in the treatment of the latter disease. These had evidently displaced the inflammation, and fixed it upon the stomach and intestinal canal. A case, which I have reported, proves that the sulphuret of potash, given in two large doses in acute croup, occasioned a very severe gastritis, which soon terminated in death."—p. 33.

M. Guibert is of opinion that there is not, as some imagine, a natural affinity betwixt hydrocephalus and croup; and he thinks that when the former follows the latter, the occurrence is purely accidental.

The croup is oftener seen in complication with other diseases, than simply by itself. It has been observed in combination with aphthæ, bronchitis, or pulmonary catarrh, inflammatory and ulcerated sore throat, pleurisy and pneumonia, gastritis and enteritis, abdominal infarction, and worms. Among the inflammatory affections of the skin, those which coincide most with croup are measles, scarlet fever, and small-pox. With the scrofulous diathesis, croup seems also to have some connexion.

Upon all these our author has made some pertinent remarks,

and has carefully pointed out the differences which exist between croup and some analogous diseases. He has also made some observations on its classifications and varieties. Passing over these as of less moment, we shall present our readers with the prognosis of croup, as drawn up by M. Guibert.

"In every case," he observes, "croup is an extremely troublesome disease, having a natural tendency, if abandoned to itself, to produce suffocation. If the patient is very young, if he has been previously debilitated by disease, or if the croup has been the consequence of a metastasis, or of the repercussion of the small-pox, measles, &c., the prognosis will be one of great danger.

"Above all, the danger is very great, and the termination of the disease almost inevitably fatal, when, in spite of the most active treatment, the symptoms increase in violence, and the patient cannot breathe but when sitting in the upright posture, when he is frequently attacked with syncope, and often brings up false membranes, without any marked relief; when the fits of coughing are severe, the voice shrill, or nearly extinct, and the face and eyes swollen; and when there is a strong fever with delirium.

"On the contrary, the prognosis is favourable when there is a diminution and gradual amelioration of the symptoms. The cough then becomes more sonorous, the expectoration easier, the breathing more free, the voice more natural, and the fever less violent. Often the excretions are observed to be more abundant, the bowels are freely emptied, the urine is passed in great quantity, and the skin becomes moist.

"The mortality of the croup is very great. In some epidemics it is almost general. For the most part, one half, two-thirds, or three-fourths of the children who are attacked by it perish."—pp. 49, 50.

Even in convalescence the patient is not out of danger. Relapses are not unfrequent, and they are almost always fatal. When these are said to have happened five or six times to the same patient, our author suspects that the disease has not been the genuine croup.

The treatment of croup may be divided into the curative and prophylactic.

The most essential part of the curative treatment consists of general and local blood-letting, to be vigorously employed and repeated in proportion to the severity of symptoms.

"Notwithstanding the praises bestowed upon blood-letting in this disease, by the greater number of authors, there are," says M. Guibert, "some physicians who have rejected blood-letting as an inefficacious and dangerous remedy. Among others, Lieutenant has given the preference to emetics. He observes, that blood-letting may be useful when the breathing is difficult and the pulse febrile; but in all other cases he looks upon it as a destructive re-



medy. Millar is of the same opinion, and several modern physicians, instead of it, confine themselves entirely to emetics. Nevertheless, the greater number of practitioners, instructed by experience, and supported by the authorities of Home, Sydenham, and Rosen, recommend blood-letting, as one of the most salutary means of cure in the first stage of croup; and my own experience is in favour of the same opinion. M. Blaud, also, in a work lately published on croup, puts great confidence in that remedy.

"At the same time with it, demulcent and diluting beverages should be employed; such as infusions of the flowers of mallow, violet, wild poppy, and coltsfoot; or a light decoction of lintseed, sweetened with honey or syrup of gum arabic or mallow. Juleps, linctuses, and oleaginous potions will be also proper. Small glysters should be likewise given with the double object of keeping the bowels open, and of quieting the general irritation. The patient should be put upon the lowest diet. The temperature of his room should be of a pleasant coolness; but currents of air should be avoided, and every thing which may be a check upon perspiration. The child should be carefully watched and the greatest attention should be paid to prevent his feet becoming cold, which may be done by tin cases filled with hot water, or by any other analogous means.

"Emetics may also be administered in the first stages with much advantage. Tartrate of antimony may be given after blood-letting, or even before it, if the patient's strength and pulse do not, in the first instance, require the latter remedy. Emetics act as deobstruents and are useful in this point of view. They are so, in a much greater degree, when, in addition to those of croup, there are symptoms of *saburra* in the first passages. pp."—53-5.

"A very rational means of cure consists in the frequent and reiterated use of warm baths; of which experience has taught me the excellent effects, not only in croup but also in all acute inflammatory affections, wherever seated. They are of especial use in the case of children, because absorption at their age is in a very active state, and this carries, in a short time, into the circulating mass, a great deal of water, adding largely in this way to the small quantity of that fluid; which is taken in by drink or glysters. I have often seen fever and inflammatory symptoms abate and vanish, as if by enchantment, after the patient had been repeatedly plunged into a warm bath, and allowed to remain in it, each time, at least half an hour."—p. 56.

A stream of warm vapour directed to the mouth, has also been of much service; but M. Guibert does not approve of vinegar being added to it. In croup, however, more perhaps than in any other malady, the energy of remedies ought to be constantly in a direct ratio with the intensity of the disease.

The principal indication in the second stage of croup, is to promote the expulsion of the adventitious membrane; to dis-

solve it by any remedy is impossible. Its expulsion will be best promoted by emetics and expectorants ; and the most effectual of these is thought by some to be antimonial tartar, in a dose of from four, to eight grains. Such a medicine, however, must surely be far too active for a child. Others prefer *ipeacuan*, in one or other of its preparations.

" M. Guersent gives the sulphate of zinc in the dose of five, ten, or fifteen grains, according to the patient's age. As I think this medicine is a too active one, I use in preference to it the following formula, which was communicated to me by M. Moulin, and from which I have derived excellent effects. It is a mixture of two grains of antimonial tartar, twenty grains of muriate of soda, four ounces of distilled water of violets, and an ounce of syrup of *ipeacuan*. It is to be given in tea spoonfuls till it produce vomiting ; and it must be repeated according to the severity of the symptoms. When children can take drink easily, each spoonful may be given in half a glassful of warm water."—pp. 60, 61.

In whatever way employed, emetics are of great use in the second stage of croup ; and their effects may be seconded by expectorants, such as sweetened infusions of ground ivy, colts-foot, and maiden-hair. For the same purpose, *polygala seneka* is recommended. Preparations of squill and antimony are also used.

" These different medicines may be employed in combination. Thus, at the Hospital for Children, an expectorant potion is sometimes made use of, composed of the following ingredients : *polygala*, two drachms ; oxymel of squill, three drachms ; syrup of *ipeacuan*, one ounce ; emetic tartar, a grain and a half ; and water enough to make a strained mixture of four or five ounces. This potion is useful, especially in what has been called a *mucous croup* ; but it should not prevent the employment of other means of recovery.

" Sternutatories have also appeared to be of service, in the second stage, to favour the expulsion of mucous matters collected in the trachea and bronchia ; and they are introduced into the nostrils in the form of powder. So snuff is employed, and what is still more active, the powder of *asarabacca*, or of lily of the valley. Some physicians have spoken highly of blowing calcined alum into the trachea, or of inhaling aromatic and exciting vapours, as of æther, vinegar, or volatile alkali. Others have recommended the fumigation of the patient's room with pepper or sulphur, in order to induce cough and expectoration. These means, however, should not be employed but in pressing cases, and when other remedies have failed ; for their efficacy is little to be depended upon. I am, indeed, of opinion, that they are rather hurtful, by the irritation which they occasion in organs already in a state of inflammation, than advantageous by the concussion resulting from their action. It is certainly much more rational, in all cases, to use

emollient fumigations, such as marsh-mallow decoction, lintseed tea, warm milk, &c."—pp. 62, 63.

Various remedies have been proposed for dissolving the adventitious membrane; and for this purpose the subcarbonate of ammonia seems to have been most employed. It is given inwardly in the dose of from four to eight grains, in the form of syrup; and outwardly it is applied to the fore part of the neck in the form of ointment, a drachm of it being mixed with two ounces of cerate. Over this ointment is placed a bag of hot ashes which is renewed every four hours. This application produces a crop of round pimples, which soon fall off in scales.

"Would it be believed," says M. Guibert, "that chlorine, a gas so extremely irritating, that an artificial croup might be produced by it, has been proposed lately by a physician for the cure of that disease. No one but a madman could ever have thought of employing such a remedy, which could have no other effect than hastening the formation of a false membrane, if it did not already exist."—p. 65.

The sulphuret of potass is equally disapproved of by our author; but he speaks favourably of the subcarbonate of potass, or soda, given in small and much diluted doses, as for instance, half a drachm in a pint of some emollient ptisan. The caustic alkalies also, have been used in a still more diluted form. However, it is not at all likely that any of those internal remedies can have the least effect in removing the adventitious membranes through the medium of the circulation. Nor need we expect mercury, on account of the slowness of its action, to be more successful.

Some authors have extolled anti-spasmodics in croup, particularly camphire, assafoetida and musk. But the best antispasmodic, in M. Guibert's opinion, is the warm bath, which he has always found admirably sedative and refreshing. Opium, externally, and internally, has been much praised.

"This remedy," says the author, "ought, as I think, never to be employed. With regard to valerian, I am of a different opinion, glysters prepared with a decoction of its root, having been of great service. The extract of valerian, in the form of a potion or electuary, is equally effectual in alleviating nervous excitement."—p. 69.

M. Guibert condemns the use of tonics in either the first or second stage; but in both stages, he speaks highly of rubefacients, derivatives, and epispastics; as well as of warm pediluvia, sharpened with mustard flour, vinegar, muriatic acid, or sal ammoniac. Camphorated liniment, tartar emetic ointment, and ammoniacal pomatum may be rubbed on the sides of the neck; and the feet and legs may be wrapt in sinapisms. Blisters may be applied on various parts of the body at the same time, or we

may use cloths drawn out of boiling water, if we wish to produce a sudden blister and the actual cautery or moxa, may be employed.

In the third stage of croup, we have to oppose suffocation and debility. When the former appears to be inevitable, tracheotomy has been recommended.

"Tracheotomy," says M. Guibert, "which is so strongly indicated, when any foreign body has been introduced into the windpipe, threatening suffocation, is attended with so many inconveniences when applied to the treatment of croup, that it has been almost generally rejected. Yet M. Caron, who has written a treatise upon croup, pretends that this operation will cure croup independently of all other remedies, but experience is by no means in favour of this opinion. The annals of medicine do not present a single instance of a real cure obtained by this method. Though practised several times upon children attacked with croup, tracheotomy scarcely retarded death for a few hours. M. Chaussier, however, thinks that this remedy may become necessary when the remedies first used have failed to arrest the progress of the inflammation, and so prevent the formation of the albuminous deposition, or to occasion its expulsion. He likewise remarks very judiciously that we should not wait, before performing the operation, till the patient is at the point of death."—pp. 74, 75.

Various mechanical means have been proposed for extracting the albuminous deposition, but all of them are liable to objection; and we must, upon the whole, be satisfied with persisting in the use of the remedies indicated in the second stage. When emetics failed to excite vomiting, that action was produced by irritating the œsophagus with a feather; and in one case it seemed to have saved life, by enabling the patient to spit up shreds of the false membrane. But when the patient is reduced in this disease to extreme debility, it is in vain to expect benefit from cordials and tonics; and it is therefore folly to make use of them.

When the disease begins to abate in violence, we must of course, continue the use of those remedies which moderate the cough, and favour the expulsion of mucous matters; we must keep the bowels open by simple and emollient glysters, and the parts where blisters have been applied must be kept running for some days.

The preventive treatment will consist in the use of warm clothing, and in removing the patient from a cold and damp situation to a dry warm one. A blister also may be kept open on the arm, and the warm bath may be occasionally employed. To the foregoing summary of the symptoms and treatment of croup, our author has subjoined eighteen cases of the disease,

three only of which were cured; and in no instance was a cure obtained but in the first stage, or the very commencement of the second. The remedies were blood-letting, emetics and issues.

"These cases," says M. Guibert, "show how great the mortality is in real croup. But in many authors we meet with numerous cases of disease, carelessly described by the name of *croup*, which were instances of mere *cynanche laryngœa*, more or less severe. Hence the notion so generally prevalent that croup is a disease of very frequent occurrence among children. In the same way we may account for the numerous cures which have been reported of these pretended croups, or, to speak more properly, of these *laryngeal inflammations*, which very seldom terminate fatally. Hence likewise, we may account for those relapses, with which children are said to have been attacked seven times. I can aver from my own experience, that the croup is a much rarer disease than is commonly imagined, and that it is frequently confounded with the ordinary inflammation of the air passages."—pp. 81, 82.

The author has made remarks upon every one of his cases, approving or disapproving of the practice employed. In those who recovered, blood-letting, blistering, and emetics were vigorously administered; and in several of those who died, the practice was far from being energetic. The cases derive their greatest value from the dissections which accompany them; of the principal features of which, however, we have already given an account.

#### HOOPING COUGH.

We have never chanced to meet with the work of any Frenchman in which theory was so sparingly introduced, and apparently so little esteemed as by our author; and for this reason we shall extract his opinion upon the seat and nature of the disease. After noticing the theories of his predecessors, he observes—

"With several of the authors already cited, I regard the convulsive cough as a nervous disease, occasioned evidently by a spasm of the diaphragm and glottis. But I think that this spasm is rarely simple and idiopathic, and that in most instances it coincides with some other affection of the respiratory organs, such as bronchitis or pneumonia, pleurisy, and sometimes pulmonary consumption. In short, the hooping-cough is, in my opinion, a cough essentially nervous or spasmodic, capable of existing by itself, and without any evident cause, but accompanied for the most part by a disease which has generally its seat in the organs of respiration, and which necessarily modifies, to such an extent, the progress, duration, and treatment of the convulsive cough, that it would seem to be its sole existing cause. Thence it follows, that all the essential diseases, which

have cough as a principal symptom, may also coincide with the hooping-cough, which then appears to be nothing else than a particular modification of the ordinary cough. My opinion is founded, 1st, Upon the diversity and even contradiction of those theories published by authors on the subject of hooping-cough, and which set out with the idea that the disease is situated exclusively in this or that organ; 2d, Upon its being, in the far greater number of cases, complicated with some other disease; 3d, Upon the uncertainty which pervades its whole treatment, and the results, often similar, which ensue from the most contradictory practice; and, 4th, Upon clinical observation, and the dissection of the bodies of those individuals who have died in consequence of the disease."—pp. 145, 146.

From what we have ourselves witnessed, we are of opinion that there is much truth in the foregoing remarks; and we think that a purely idiopathic hooping-cough, if such ever existed, is by no means a formidable disease.

It is endemic in some countries, and in others it is occasionally epidemic; but M. Guibert will not allow it to be contagious. From the manner, however, in which we have observed it to attack the individuals of a family, we cannot help believing that it is propagated by contagion; and such was the belief of Rosini, Underwood, and Cullen. In Sweden, nearly three thousand children die of it annually.

Hooping-cough is, indeed, almost exclusively a disease of children, particularly those of a nervous temperament, and it appears to be to them what asthma is to old people. It seems to attack both sexes indiscriminately.

Our author has given a very faithful picture of the phenomena of hooping-cough, but the disease is so familiar to practitioners, that we shall merely extract a few of his remarks on the *post mortem* appearances. The bronchia and their ramifications are observed to be obstructed with a great quantity of mucous matters, of greater or less consistence; and these, by their presence, seem to be the principal cause of the duration of the convulsive cough. They are almost always found in the bronchia of those children who have died of hooping-cough. Inflammation of the mucous membrane is sometimes met with, but it is not essential to the disease. In some instances the capacity of the small bronchial ramifications is four times greater than what it is naturally; but this appearance is seldom met with but in one side of the chest. Sometimes much bilious matter is found in the intestinal canal; and it is thought by many that saburræ of this sort have contributed greatly to the continuance of the cough. There is also not unfrequently a congestion of blood in the vessels of the brain.

The hooping-cough may terminate in recovery, in death, or in some other disease. When it has begun in Autumn or Winter, it will cease spontaneously in the Spring or Summer; and a change from a cold to a warm climate has the same effect.

"It will terminate in death, when the disease which accompanies or followed it is naturally severe or mortal; such as pulmonary consumption, chronic pneumonia, pleurisy with sero-purulent effusion, bronchitis terminating in suppuration, &c. Death may also happen in other cases, as when the patient has been much debilitated, when the disease has been improperly treated, and when a dangerous complication has unexpectedly taken place."—p. 173.

Death may also be occasioned by suffocation, in consequence of the abundant mucous matters collected in the bronchia; or by the excessive inflammation of very acute bronchitis or pleuropneumonia.

There is but one species of simple hooping-cough; but M. Guibert enumerates several complicated species, such as the catarrhal, the pneumonic, the pleuritic, the phthisical, and the bilious.

"Hooping-cough is generally a troublesome disease, even in its simplest form, on account of its long duration, and the obstinacy of its character. However, the age of the patients, their strength, their temperament, the influence of climate and season, are circumstances which will enable us, to a certain extent, to prognosticate the mode of its termination. But a favourable or unfavourable prognosis will be best drawn from the leading symptoms, and the course which they pursue. Recovery is announced by the abatement of the cough, and the diminished frequency of the *kinks*, the breathing becoming free, by the absence of fever, if it previously existed, and by an easy and abundant excretion of mucus from both mouth and nostrils, by the cessation of vomiting, the disappearance of the sound peculiar to hooping-cough, and the return of the cough in a natural state, analogous to that of a simple catarrh. The unfavourable symptoms are: the debility of the patient, tender age, mal-conformation of the chest, short and difficult breathing, a quick pulse, a dry cough, entire stoppage of expectoration, emaciation, general prostration of strength, œdema of the face, limbs, colliquative diarrhœa, &c."—pp. 173, and 186, 187.

In the treatment of this disease, we do not find that M. Guibert has added much to the knowledge of his predecessors, is but fair, however, by a few extracts, to give the reader an idea of his practice.

"If," says M. Guibert, "the hooping-cough is simple, and without fever, all we have to do, in the first period, is to administer some emollient drink, an infusion of mallow, wild coltsfoot, or borage, sweetened with honey or syrup of "

simple electuaries, or such as have a little syrup of poppy added to them; or mucilaginous juleps, mild expectorants, ground ivy, infusion of hyssop, or syrup of maiden-hair, are also prescribed with advantage. We should encourage perspiration, by keeping the air at a mild temperature, and making the patients wear warm clothing, of wool or flannel. Emetics, in small repeated doses, have often much efficacy in warding off the *kinks* of hooping-cough; and for this purpose we may employ tartar emetic or kermes, and ipecacuan in substance, decoction, or syrup. Pastils of ipecacuan or of emetine, given daily, are also of great service. It would appear that purgatives are of less utility; but after the employment of emetics, they may be of use to excite the alvine discharges, and lessen the irritation of the bronchia; and the medicines best adapted for this purpose are manna, cassia, and castor oil.

"If hooping-cough is accompanied by fever, if the patient is full of blood, or disposed to inflammation, or if the constitution of the atmosphere is favourable to the inflammatory diathesis, we should not hesitate a moment to employ both general and local blood-letting. From three or four to fifteen or twenty. Leeches should be applied on the forepart of the chest, and on its sides, always proportioning the number to the age and strength of the patient. They may be repeated or not according to the effect produced; but great care must be taken not to superinduce debility. The best guides in this respect will be the pulse, the physiognomy, and the heat of the skin. Instead of leeches, cupping and scarifying may be employed. General blood-letting will require much more circumspection than leeches, on account of the debility which it sometimes so speedily produces.

"In this period we may also administer mild anodynes, as juleps and electuaries, with syrup of poppy, &c."—pp. 189-191.

When, in spite of these remedies, the hooping-cough, having reached its second period, is still obstinate, but without fever or inflammatory complication, derivatives and anodynes are indicated to moderate the too abundant secretion of mucus from the bronchia, and to calm the inordinate excitement of the nervous system. To answer the first indication, blisters are of most use, and M. Guibert seems to prefer those used by M. Nauche, which are prepared with opium and camphire, in consequence of their giving hardly any pain. The tartar emetic ointment has also been much praised; and it is rubbed on the epigastric region; but, according to our author, it has very little advantage over other derivatives. Indeed, he is inclined to think that it sometimes, by absorption, does positive harm, acting on the stomach and bowels in rather too violent a manner.

"To children attacked with hooping-cough, I have often," says the author, "administered calcined magnesia, in the dose of seven or eight grains or more a-day, in water sweetened with sugar, and



I have found it to do much good; but it must be continued for some time. Its effect is to lessen the too abundant secretion of mucus from the bronchia and stomach, and consequently to remove the cough and vomiting. This remedy, which few authors have mentioned, appears to me from its utility, to be deserving of particular notice. The other absorbents are also useful."—pp. 193, 194.

To lessen the excitement of the nervous system, antispasmodics and sedatives are employed. The antispasmodics most in use are musk, camphire, assafoetida, castor, valerian, and oxyde of zinc. To do good, musk should be given in very large doses. Assafoetida does most good when given in glysters, and M. Guibert looks upon it as a valuable remedy; and the same thing may be said of camphire and valerian. He has given castor in tincture with advantage, in the dose of fifteen or twenty drops, in some convenient liquid. He has often seen the oxyde of zinc administered in a dose of from six to twenty grains; but it is an uncertain medicine, though occasionally it has done good.

Of sedatives, those which are most esteemed are opium, belladonna, henbane, hemlock, lactuca virosa, and meadow narcissus. Of all the preparations of opium, laudanum given in glysters appears to be the most efficacious. It may be conjoined with camphire. Some have proposed to substitute for opium the extract of the wild poppy; and even are surprised that this medicine is not oftener used; for it is undoubtedly a milder anodyne than the other, and not merely from its being a weaker opiate, for in no dose will opium ever be the same gentle medicine as the extract of the wild or even the garden poppy. Belladonna, even in a very small dose, has produced disagreeable accidents. It has been given in combination with oxyde of zinc and hemlock. The following formula also has been used: musk, six grains; belladonna, a grain and a half; camphire in powder, twelve grains; saffron, fifteen grains; extract of opium, one grain; these are to be mixed, s. a. and made into twelve pills; of which one is to be given night and morning. However, M. Guibert thinks that a more convenient mode of administering these medicines is to make them up with sugar and gum arabic, into the form of lozenges. Yet he thinks it better to give belladonna alone, gradually increasing its dose; and to abstain from its use when there is fever, or sanguineous plethora, or any inflammatory affection of the throat, or irritation of the primæ viæ, or dimness of sight, in consequence of the specific action of belladonna. The effects of hemlock, henbane, lactuca virosa, and meadow narcissus, are not always beneficial. M. Nauhe has found stramonium of great use in allaying *kinks* which were extremely violent. But sedatives, our author very properly ob-

scres, are no ways to be depended on, unless every inflammatory symptom is absent, and the cough merely kept up by a kind of nervous habit.

In what is called the third period of the disease, the remedies we have already mentioned are often indicated; but sometimes anodynes alone or emollients are necessary.

"We have thus seen," says M. Guibert, "the juice of raw turnips mixed up with sugar, and given in spoonfuls, alleviate extremely well the kinks of convulsive cough, and even produce a complete cure, after all other medicines had failed.

"It is particularly in this last period that tonics and slight stimulants have been recommended. Bark in substance, and its different preparations, particularly the syrup, have thus been of great benefit. Does it act in this disease as it does in intermittents? The sulphate of quinine is attended with the same good effects; and in the case of children it is preferable to bark, as its dose is of small bulk and less disagreeable to the taste. It may be given in a dose of from five to twenty grains. Tonics may be combined with antispasmodics and sedatives; of which the following formula, recommended by M. Moulin, is an example: Take yellow bark in powder, ten grains; sulphur sublimed and washed, powder of valerian, iron filings, of each five grains; gummy extract of opium, two grains. Mix the whole, and divide into six doses; of which the patient may take one every evening in a prune, or some such thing."—p. 202.

M. Guibert condemns the use of oxymel of squills, and of all acids, in this period of the disease, and we believe he is right; but in the very commencement of simple hooping-cough, in the proportion of one part of vinegar of squills, to two parts of syrup of sugar, we found it almost a specific when taken by the children almost *ad libitum*.

"The tincture of catharides, given internally and much praised by Hufeland; pure hydrochloric acid, proposed by M. Thiel, in the dose of two or three drachms a-day, in six or eight ounces of water sweetened with sugar; the hydrocyanic acid and the distilled water of the lauro-cerasus, extolled as such powerful sedatives, are all remedies; which, notwithstanding the benefits said to be derived from them, appear to me to be dangerous in most cases; and I think that they ought, in general, to be proscribed in hooping-cough. It must be allowed, however, that the hydrocyanic acid in very minute and frequently repeated doses, has been of service."—pp. 202, 203.

Such is a sketch of the mode of treatment mentioned by our author; very little of which is new to practitioners of experience. Of all the remedies recommended, we have most faith in blisters and emetics, particularly in the case of very young children; and of the latter we prefer the ipecacuan wine to all

others. A single tea spoonful generally operates almost immediately; whereas it will sometimes be necessary to give many tea-spoonfuls of antimonial wine, or of the antimonial solution, before vomiting be induced, to the imminent risk of the little patient.

After some remarks on the prophylaxis of hooping-cough, M. Guibert furnishes us with some interesting cases, illustrative of the practice of the French practitioners. Out of eighteen cases, twelve were complicated, and terminated in death. The remaining six were simple, with a slight complication in two of them of pleurisy, and in three of ophthalmia, and they all recovered. The author finishes his account of hooping-cough, as he did of croup, with what he calls conclusions, which are merely a short summary of his preceding observations.

We have now arrived at the third part of our author's work, in which he has favoured us with his observations on certain diseases of the chest and wind-pipe, as they appear in infancy and youth, particularly those which may be confounded with croup.

The first of these is the cynanche of the small pox (angine variolique) which can barely be distinguished from croup by the eruption peculiar to it.

"In both diseases," says M. Guibert, "the mucous membrane of the wind-pipe is equally subject to inflammation; but in the cynanche of small-pox, no false membrane is formed on the internal surface of the air tubes, as in the true croup. In place of it, we observe sometimes concreted puriform plates, and sometimes ulcerations of the mucous membrane; or at other times we meet with well-marked variolous pustules, or merely red and prominent points with which the membrane has the appearance of being studded."—pp. 268, 269. The treatment of both diseases is the same.

Cynanche laryngœa and trachealis are sometimes so intense, that they might be mistaken for croup, if the voice were similarly affected, or if they were equally dangerous. In both diseases, however, the same active treatment is requisite.

Œdema of the glottis is the disease which has most analogy to croup; and the diagnosis of the two is so extremely difficult, that physicians even of great experience have sometimes confounded them. Indeed, it is only by dissection that the true nature of each can certainly be known. In both, the prognosis is unfavourable; but though the symptoms are nearly similar, the treatment is very different.

"In œdema of the glottis, antiphlogistics are rarely necessary. It is better to give emetics in nauseating doses, to apply blisters frequently, and to administer calomel internally, or use mercurial frictions to the outside of the neck. If these remedies have no

effect at the commencement of the disease, we must practice tracheotomy without delay ; for the course of the disease is so rapid, that it will often kill the patient in 24, 36, or 48 hours. In this disease the operation of tracheotomy presents us with a much better prospect of success than in croup ; indeed it will save the patient, if the disease is not complicated."—pp. 279, 280.

It being of importance to distinguish this kind of œdema from croup, we shall extract the whole of the author's passage on this subject.

" There is no pain," he says, " in any part of the neck, even on pressure ; neither is there any fever, unless there is some inflammatory complication. Some other kind of dropsy, however, is present, such as ascites, anasarca, or an almost constant puffiness of the face and eyelids. There is either no cough, or, if any, it is extremely trifling. With regard to the other signs of croup, such as the alteration of the voice, or its sudden extinction, the difficult and hissing breathing, the croupal sound of the cough, are all equally present in œdema of the glottis.

" It is proper to note also, that the affection of which we are now treating, is frequently symptomatic ; and that consequently it is preceded, for the most part, by different diseases, particularly acute or chronic inflammations of the chest or pharynx. Fever may then show itself, but it is much milder than in the croup, and is sooner accompanied, indeed almost from the commencement, with a good deal of debility, and with paleness of the face and whole body, circumstances which will contribute to make the diagnosis more clear. Besides, in most cases, the œdema of the glottis is complicated, with cynanche pharyngœa, and the serous infiltration is not confined to the upper part of the larynx, but extends to the sub-mucous texture of the pharynx and veil of the palate. The uvula is more or less swelled and œdematous ; the size which it acquires in these circumstances occasions phenomena, analogous to these which depend on the prolapsus of this organ, and tends to augment the dyspnœa and the difficulty of swallowing. This last symptom, which is evident to the senses, is not without value, and accordingly should be attended to."—pp. 280-1-2.

With M. Guibert's farther remarks on bronchitis, pneumonia, pleurisy, dilatation of the bronchia, and pulmonary consumption, we do not think it necessary to trouble the reader ; but we may observe that many cases illustrative of the subjects have been introduced.

Though we have been rather full in our review of this work, we cannot say that in our perusal of it we have met with much new matter, but we have met with much good sense, and a careful investigation of several practical points, without any admixture of absurd or nonsensical theory. The cases, in general, are interesting and really valuable from the dissections accom-

panying them, which seem to have been made with great care and to be faithfully reported ; and it is undoubtedly from these cases, that the volume derives the greater part of its value. We may add, that, as M. Guibert purposes to write upon pulmonary consumption, we shall hope to have the pleasure of meeting with him again.

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ART. V. *An Exposition of the Natural System of the Nerves of the Human Body.* By CHARLES BELL, 8vo. London, 1824. [With Plates and Wood Cuts.]

Although the peculiar opinions of Mr. Bell, with relation to the nervous system, have already been brought under the notice of the public in various ways, he has now probably done as much as is possible to ensure attention to them, by republishing the papers in which they were contained, from the *Philosophical Transactions*, with the addition of some general remarks. We shall give a compendious view of these, endeavouring to distinguish the points which are proved, from those which are more or less hypothetical.

After some preliminary observations on the nature and structure of nerves, Mr. Bell proceeds to the spinal marrow, and in describing it lays down the first of his doctrines of the nervous system ; namely, that the spinal marrow is composed of six distinct tracts or columns, three on each side ; of which one is for voluntary motion, one for sensation, and one for the act of respiration. The two former will be universally admitted, their existence having been proved by Mr. Bell's well known experiments : the latter is more doubtful, and is connected with the hypothesis to be afterwards mentioned. This much is certain, that no such division into three columns on each side is visible, except perhaps in the medulla oblongata.

Mr. Bell next describes the mode of origin, the structure, and the distinct functions of the anterior and posterior roots of the spinal nerves. He is fully entitled to the discovery of the latter (the distinction of their functions) ; in the former he coincides with previous writers.

Having shewn that the anterior column of the spinal marrow and the nerves arising from it, have a power over the muscular system, he is induced to infer that the nerves arising from this same column in its continuation through the brain, must also

be exclusively nerves for muscular motion. These nerves are—  
 1st, The ninth, arising by a single series of roots from the *corpus pyramidale*; 2d, The sixth, arising from the upper part of the same body; and, 3d, The motor oculi, arising from the *crus cerebri*. With regard to the two latter, it is not possible to obtain any decisive proofs how far they may or may not also be nerves of sensation; but of the ninth pair, we know by positive experience in the human subject, that touching them (which was done with other objects in view than this question,) produces evident and considerable pain. We willingly admit that this fact is not sufficient evidence of sensation in ordinary circumstances, nor do we mention it as such, but merely as a fact of some interest.

His next object is to show the analogy of the fifth cerebral nerves with the spinal; an opinion which had already suggested itself to others, and which, notwithstanding some slight differences, may be considered as pretty decisively established. Not to mention other circumstances, the analogy of the fifth cerebral with the spinal nerves is expressly stated by Sömmering, Vol. V. §. 166. It is interesting to observe, that the fifth pair, like the spinal nerves, has direct communications with the ganglia of the sympathetic in its vicinity; namely, the ophthalmic branch with the lenticular ganglion; the superior maxillary nerve with the sphenopalatine ganglion; and the inferior maxillary nerve also with the sphenopalatine ganglion, by means of the vidian nerve and chorda tympani. This view of the subject also receives confirmation from the researches of Spix, Meckel, Blainville, Geoffroi St. Hilaire, &c., who have very ingeniously demonstrated the similarity of the component parts of the skull to the body and processes of a vertebra. The fifth pair differs from the spinal nerves in the following particulars: the ganglion on its posterior root is softer and less firm; the anterior root continues distinct from the posterior throughout its course, and forms almost exclusively the deep temporal and buccal nerves; lastly, the communication with the sympathetic is not direct from the trunk, but separately from each of the three principal branches.

Mr. Bell divides the spinal and cerebral nerves into regular and irregular. We are at a loss to understand his statement, "that there is an obvious division of the *medulla spinalis*, corresponding to the cerebrum and cerebellum;" that its anterior and posterior columns are distinct in function is certain; but surely the distinction between the cerebrum and cerebellum is not to be placed on the same footing, which would lead us to consider the encephalon only in connexion with feeling and motion. Each of the regular nerves has two roots, one from

the anterior and one from the posterior column: these nerves are—the fifth cerebral; the sub-occipital; the six cervical; twelve dorsal; the five lumbar; and the six sacral. According to Mr. Bell, these nerves are

“Common to all animals, from the worm up to man; and for the purposes of common sensation and motion, or acts of action; they run out laterally to the regular divisions of the body and never take a course longitudinal to the body.”—p. 44.

The remaining (cerebral and spinal) nerves, Mr. Bell calls *regular*, a metaphorical term, and only allowable for the purpose of explanation.

“They are distinguished by a single root from one column. They are *simple* in their origin; *irregular* in their distribution; and deficient in that symmetry which characterizes the first class. They are superadded to the original class, and correspond to the number and complication of the superadded organs. Of these there are the third, fourth, and sixth to the eye; the seventh to the face; the ninth to the tongue; the glosso-pharyngeal to the pharynx; the tenth to the vagus to the larynx, heart, lungs, and stomach; the eleventh to the diaphragm; the spinal accessory to the muscles of the shoulder and the external respiratory to the outside of the chest.”

It will be remarked that Mr. Bell has not arranged the first cerebral nerves in his second class, though in so far as they arise from one column only, they may equally with the nerves last mentioned be called irregular. More than this, however, they appear to present a contradiction to his peculiar view which we are not aware that he has explained: they are nerves of sensation, and yet they arise from what, according to Mr. Bell, must be considered as a prolongation of the anterior column of the spinal marrow; in other words, two nerves of sensation arise from a column, which is stated to give origin exclusively to nerves of motion. The same difficulty does present itself with regard to the auditory nerve which actually arises from the posterior column.

*The Respiratory System of Nerves.*—Under this head Mr. Bell classes those nerves which are devoted to not only respiration, but also its dependent functions, smelling, speaking, singing, laughing, &c.; of this kind are the fourth and fifth portions of the seventh pair of nerves, the glosso-pharyngeal, the par vagum, and the accessory nerve, which Mr. Bell describes as arising from the same nervous column. It must be mentioned that, independent of any hypothesis, the fact has been fully substantiated by experiment, as far as regards at least of these nerves, that they combine the actions of parts to which they are distributed, with those of the immediate organs of respiration. Mr. Bell candidly admits that the al-

late proofs of the doctrine he suggests stop here, and that the rest is hypothesis.—p. 61.

He *imagines* "that the same column or track which gives origin to the fourth, seventh, glosso-pharyngeal, par vagum, and spinal accessory nerves is continued downward along the lateral part of the spinal marrow, and that it affords roots to the spinal nerves, constituting them respiratory nerves, as well as nerves of motion and sensation ; and that it especially supplies the roots of the diaphragmatic nerve," (p. 62.) and what he calls the external respiratory nerve.

We need hardly say that this *imagination* is liable to many objections, and that in some respects the evidence of facts, as far as they go, is against it. It would not be a very easy matter to assign any probable reason why the spinal nerves of the lower parts of the body, rather than those of the upper, should combine in themselves the distinct powers which we are told by Mr. Bell are subservient to respiration, motion, and sensation. Why should the respiratory nerves be distinct in the one case and not in the other? Are the motions of the abdomen and trunk so much less frequently combined with respiration, than those of the neck and face, as to afford any probable explanation of this difference? The phrenic, and the so called external respiratory nerve, are to all appearance branches from common spinal nerves, and it is too much that we should be required to *imagine* them any thing else on the authority of confident assertion or vague analogy. As the case stands, the evidence of facts is rather against Mr. Bell on this point. In all parts of the spinal column, the distinct cords for sensation and motion will be admitted, together with the nerves arising from them and presenting the same difference of function. The space between these columns, which Mr. Bell chooses to assign to the function of respiration, equally exists throughout the spine. In the upper part of the spine, this space is found to give origin to a set of nerves, which if they have not exactly the kind of function attributed to them by Mr. Bell, are at least perfectly distinct from the common nerves of sensation and motion. In the lower part of the spine this same space does not give off any filaments, and consequently the inference must be, until the contrary is proved, that there are not any nerves there correspondent to those which it gives off above.

We have hinted that though the nerves which Mr. Bell calls respiratory, are perfectly distinct from those of sensation and motion, as he has the merit of having proved by experiment, with regard to some of them, yet it by no means follows that he is correct in the function which he has attributed to them.



Surely when we look at the intricacy of the distribution of the par vagum for instance, to the throat, neck, heart, lungs, stomach, &c., we must feel dissatisfied with the hypothesis which would answer our inquiries by the almost unmeaning statement that it served to associate these parts with the respiratory action. Our dissatisfaction is increased when we find that this hypothesis appears to have been formed without a due consideration of others, and without a reference (on this particular point) to the inquiries of Dr. Wilson Philip. Surely Mr. Bell would not if he had properly considered the subject, so far have committed his judgment as to leave his readers to infer that an interruption of the association between the stomach and the organs of respiration was sufficient to explain the cessation of digestion when the nerves of the eighth pair are divided. Can it be supposed that the failure of such an association is in itself a sufficient cause of death?

That the nerves which Mr. Bell has pointed out are distinct in function from the spinal nerves of motion and sensation, there seems but little reason to doubt; the nature of that function appears to us, however, very far from having been satisfactorily made out. Of Mr. Bell's doctrine on this subject, we would say, that the facts both anatomical, and experimental, which he has adduced in its support, are, as far as they go, good, and highly creditable to his talents and industry; as regards the hypothesis on the contrary, we are inclined to believe that it is not only unproved but improbable. If it were allowable to make a suggestion on a point where much additional information is required, we think it would not be irrational nor inconsistent with what has been proved by Mr. Bell and by others, to suppose that the nerves in question were distinct in function, not only from the common spinal nerves, but also for the most part from each other. To any one who considers without prejudice, what is actually known of their distribution and office, it must doubtless appear somewhat strange to bring under the same class of nerves, the portio dura of the seventh, the par vagum, and the spinal accessory. Of the fourth pair of cerebral nerves and of the glosso-pharyngeal, so little is positively known, that though we are not authorized to assert any thing, we are at present at least privileged to doubt. Mr. Bell has succeeded in establishing his doctrines most perfectly as regards the portio dura and the spinal accessory nerve; but even here if we allow these to be respiratory nerves, is it not probable that they are also something more?

His success in these instances is more particularly attributable to the circumstance of the applicability of experiment, for

the purpose of decision. We are therefore the more surprised when we find Mr. Bell in more than one place joining in the senseless cry which has recently been raised against the practice of performing experiments upon living animals. No one who is acquainted with the subject, will pretend to deny that such a practice is liable to considerable abuses, and that abuses have actually occurred : but giving its full weight to this admission, it most undoubtedly forms no kind of argument against the application, under proper restriction, of what we must be allowed to call, though some we know think otherwise, an exceedingly important assistance in the investigation of physiological science. We respect the principles of every man, however shallow his judgment and weak his arguments, who acts from conscientious motives, and we are willing to allow much to the excited feeling of the public; but it is with no small share of disgust, that in this as well as some similar subjects, we witness the artifices by which a few narrow-minded men endeavour to raise and to avail themselves of the prejudices of the multitude, for the sole purpose of thereby attaining to a spurious distinction, well aware that every legitimate road to eminence is obstructed by their own insignificance and want of talent : unworthy superiority is the object in view ; the means are indifferent, and are employed only in so far as they tend to individual aggrandizement.

We do not pretend to have followed Mr. Bell through every part of this work, but on the contrary, have more particularly confined ourselves to the introductory observations, which approach most nearly to a precise statement of his peculiar opinions, and of which the subsequent papers republished from the *Philosophical Transactions* form the illustrations. We need scarcely remind our readers that we have from time to time noticed and given abstracts of the latter as they appeared.

We have endeavoured to give an unprejudiced exposition of Mr. Bell's opinions, and in doing so have in many instances employed his own language with unimportant variations. If we have failed in doing so more perfectly, some of the blame at least is attributable to the want of precision in the language if not in the ideas of the author himself, more particularly in the extreme redundancy of his expressions. One other fault is so natural, and so free from any appearance of consciousness, that it deserves considerable indulgence ; we mean his vanity. In conclusion, we will only remark, that if we have mis-stated his doctrines, nothing will give us greater pleasure than to confess the error, should the existence of mistake be pointed out to us.

ART. VII. *Memoire sur les causes des Convulsions chez les Enfants, et sur les Moyens d'y remedier*; par le Dr. J. L. BRACHET; Medecin de l'Hôtel Dieu de Lyon, &c. Paris, 1824. 8vo. p. 392.

The really useful parts of this volume might have been comprised within a much smaller compass than they at present occupy. It is one of the disadvantages of the prevailing system of book-making, that instead of getting merely the results of the experience of an individual on a particular subject, the public is burthened with unnecessary details of historical facts without any adequate advantage, and with criticisms on the opinions of others, introduced merely for the purpose of occupying space and giving the whole the appearance of a treatise *ex professo*. In the present instance, we shall avail ourselves pretty freely of our privileges, and give a short sketch of the book and the materials it is composed of.

M. Brachet describes convulsion as a violent, alternating, involuntary motion, of short duration, of a more or less considerable number of voluntary muscles, with or without loss of sense, and always without frothing at the mouth. The occurrence of convulsions is generally, though not always, announced by precursory symptoms. The eye of the patient is quick and haggard; his temper becomes impatient, fretful and peevish; his sleep is interrupted by frightful dreams. As the symptoms proceed, the eyes become habitually open or fixed, or only half closed, the pupil being concealed, and the sclerotic alone appearing between the lids; the ball of the eye is in constant motion; the countenance changes rapidly and frequently; respiration is unequal and suspirious. The child cries plaintively, sometimes at intervals, sometimes without intermission. He shivers without any cause, or from slight ones: this shivering is most frequent during sleep, and often awakes the patient. He grinds his teeth. The arms become stiff, and are moved quickly and involuntarily: the fingers are stretched out, and the thumbs alone bent inwards. The hands are carried mechanically to the nostrils, rubbing and scratching them.

When convulsions occur suddenly, the child is attacked with singularly varied motions. The body is stiffened in various directions; the limbs are bent, extended and contorted, without being able to execute any precise motions. The fingers and toes are alternately extended and contracted, separated and brought together. The head is bent to one or other side or

**rotated.** The eyes roll in their sockets, become prominent and **haggard**, or the pupil is concealed under the upper lid. The **tongue** is tremulous; the larynx constricted, impeding **respiration** and voice. The heart beats violently; the stomach rejects **its contents**; the intestines and bladder expel the **fæces** and **urine**. This combination of symptoms does not always exist: frequently the convulsion effects only one part, or passes from **one** to another. The eyes and face are the parts most commonly **affected**, and next to them the superior extremities; the inferior **much less so**.

Frequently the convulsions are confined to one side of the **body**, or to the parts above or below the diaphragm. In some **cases** the patient retains all his faculties; in others he is **unconscious** of what passes. This state of convulsions rarely **continues** above a few hours, when it lasts longer it becomes **less intense** and suffers apparent intermissions. Whether the disease **be continuous** or intermittent, it terminates in the same manner; the convulsions become less violent and less frequent; the **expression** of the eyes and face becomes natural, and the patient **complains** only of headache and lassitude of the limbs. The **subsidence** of the attack is frequently attended by sleep. The **progress** and termination of the disease are not limited to any **fixed periods**.

The functions of other organs than those primarily affected **are sometimes** disturbed, but only in a slight degree: the pulse **is commonly** hard and small; fever exists in the case of **congestion** in the brain or inflammation of any organ. The tongue is **sometimes** clean and sometimes foul. Convulsions sometimes **produce** various accidents, which are far, however, from being **constant**; such as local pains, more or less extensive ecchymosis, laceration of tendons, fracture or dislocation of bones, **contusions**, &c.

Convulsions may be distinguished from tetanus and trismus, by the **alternations** of contraction and relaxation. According to **M. Brachet**, it is distinguished from epilepsy, by the more sudden **invasion** of the latter, by the more rapid movements, by the **presence** of froth in the mouth, by the more speedy termination of the fit, and by the dull and heavy state in which it leaves the **patient**. It may be doubted whether all this is not something like a distinction without a difference, and at all events, it is of **very little consequence** in practice. From chorea, convulsions **differ** in the peculiar nature of the motions of the former, and in the fact that the patient still possesses a certain degree of **volition** over the parts affected.

Convulsions are frequently complicated or connected with

other diseases, but this circumstance, in general, produces little change in their nature, however it may affect their progress or termination. The most common termination of convulsions, is the progressive cessation and disappearance of the symptoms. It is sometimes, though rarely attended by crisis, such as hemorrhage, diarrhœa, vomiting or fever. But too frequently, on the contrary, the event is fatal; and this occurs in two ways; either by an affection of the brain primarily, which, having been over-excited, ceases to act on the other organs, (or rather exerts an injurious influence over them,) and thus interrupts respiration; or, the lungs are first affected from the action of the convulsed muscles; they become loaded and obstructed, and in that way cause suffocation.

We pass over nearly two hundred pages, which the author has filled with the details of cases and remarks on them; a most extravagant abuse of a practice which is in itself good and praise-worthy. The proximate causes of convulsions, as of most of those other cerebral diseases, are enveloped in great obscurity. In the case of the convulsions of children, this obscurity is farther increased by the fact that the recorded examinations after death are but few and often unsatisfactory. The most common appearances are those of increased vascularity of the membranes of the head, together with serous and gelatinous effusion between them. In three cases of general convulsions collected by M. Lallemand from various sources, there existed collections of matter in the brain: in all of these, however, the convulsions had been replaced by paralysis previous to death; whence M. Brachet concludes that they were in fact dependent on the inflammation which produced the collections of pus. The state of morbid anatomy is at present insufficient to determine with any degree of accuracy the relation which probably exists between the convulsions of particular parts and the affections of particular portions of the encephalon. It cannot be denied that convulsions, like other nervous diseases, sometimes occur, and even prove fatal, without leaving any very evident traces of the causes which gave rise to them; a circumstance which probably in a great measure depends on the stage of their progress at which they have been brought to a termination. At the same time, we are not among those who refuse to admit any other morbid conditions as the actual causes of disease, than those of which the nature is so evident as to attract attention on a superficial examination. So much depends on the progress of disease, and the stage at which it may happen to prove fatal in individual cases, that we must not be surprised if morbid anatomy alone should be found inadequate to afford a satisfac-

**tory** explanation of the occurrence and connexion of symptoms. In no instance do we find this to occur more frequently than as regards nervous diseases, in many of which, much more information may be derived from physiology, and from the cautious employment of a train of reasoning resting chiefly on the ground of analogy.

We shall confine our notices of the remaining parts of *M. Brachet's* book to some account of his observations on the treatment of Convulsions. When the disease is not a secondary effect of any local affection, in other words, when it is idiopathic, he is strenuous in the recommendation of anti-spasmodics. Of these, the oxyde of zinc is that which he considers as by far the most generally efficacious. He states, that he has invariably observed it to produce tranquillity in a very great number of cases. This effect is constant, though, if the cause of disease continue, the calm is but momentary, and the medicine is ineffectual as regards the cure. He gives it either singly or in combination with other substances, and in quantities varying from a quarter of a grain to five grains several times in the day. He advises great attention when it is joined with opium, and speaks in much more favourable terms of its combination with the extract of hyoscyamus, giving, in four and twenty hours, at least two grains of the oxyde with four of the extract, but rarely carrying the dose of either above ten grains. When the symptoms are very intense, he advises that the first few doses should be repeated at much shorter intervals than under ordinary circumstances. The oxyde he has found to be less useful in the case of irritation existing in the digestive organs, but even in this case the occurrence of any unpleasant consequence is in a great measure obviated by its union with opium, hyoscyamus, &c.

Of the oxyde of bismuth *M. Brachet* speaks in very different terms. He says, that after having employed it in every dose up to twelve grains in twenty-four hours, he has abandoned its employment from a conviction that it never produced the slightest effect. "I am very well content," says he, "to resign it to a place on the toilette, notwithstanding the favourable observations of Odier."

Opium he has found admissible and serviceable in proportion as the characters of cerebral congestion are less distinct-marked, as there are evidences of the existence of irritation, and as there is less disposition to somnolency. Of the effects of hyoscyamus singly, he confesses himself unable to speak, his experience is limited to the combination already noticed.

Amber and ambergris, castor, musk, assafoetida, and camphor. He dismisses with the following general observation :—

“ Their stimulant, and at the same time, anti-spasmodic renders them useful in those cases, in which it is necessary to support the strength as well as to calm agitation ; a circumstance however, sufficiently uncommon.”

He advises, that whatever be the measures put in practice the utmost attention should be paid to the state of the stomach and the effect produced upon it by the treatment. He reminds his readers that anti-spasmodics in general, are more or less stimulant, and that their administration is never free from danger in a stomach already in a state of irritation. Hence it is, that the best anti-spasmodic will often be found to consist in a mucilagenous mixture, &c. At the same time, attention should be paid to every external circumstance, which might be supposed capable of modifying the state of the disease, or the action of the remedies upon it.

He imposes considerable limitations on the employment of emetics and purgatives, the former more particularly. As to the latter he ranks calomel, of which he remarks, that it by no means justifies the confidence reposed upon it in cerebral affections, and that it must frequently be considered as the “*inane princeps remedium quum nullum*” of Celsus. He absolutely prohibits it during the existence of irritation in the alimentary canal, and suggests, as a measure of prudence, that it should in all cases be preceded by the ordinary farrago, known among our neighbours under the general term of “*boissons adoucissantes, rafraichissantes, &c.*”

The treatment to be pursued during the attack of convulsions must depend in a great measure on accidental circumstances. Thus, as the author remarks in some of the worst cases, the patient is unable to swallow, and we are compelled to withhold his sufferings, while our power of relieving him is materially limited. When the violence of the convulsions indicates the existence of considerable cerebral irritation, he at once resorts to the oxyde of zinc and extract of hyoscyamus, with the occasional use of ether, liquid ammonia, &c. If the convulsions continue, or are imperfectly dissipated, with loss of sleep, we shall obtain good effects from the association of narcotics, and particularly opium, with the anti-spasmodics. The acetate of ammonia may perhaps be preferable to most other preparations ; in any case, the effects produced on the encephalon must be attentively watched. If the convulsions continue, especially if the case be unsuitable for the use of narcotics, and if the state of the intestinal canal form no objection, purgatives may

employed with the view of producing a salutary revulsion. Calomel is the purgative which M. Brachet prefers in such cases, employing it sometimes in pretty large doses, and if necessary, combining it with jalap, aloes, gamboge, &c.

The action of all these remedies may be farther assisted by the use of the warm bath at a moderate temperature, repeated at moderate intervals, by fomentations and by frictions, either simple or medicated. In the case of cerebral congestion, advantage will be derived from the constant application of cold cloths to the head, and by keeping the patient nearly in the erect posture. Sinapisms and blisters are also to be applied to the extremities: the latter, however, are more suitable to the latter stages of the disease, and especially when placed on the upper part of the spine and nape of the neck.

Such is the substance of the treatment which M. Brachet employs in the case of convulsions independent of local disease, of that kind, in short, which alone deserves notice as a distinct disease under that name. It would only lead us unnecessarily from the subject, to notice his remarks on symptomatic convulsions, and we think we should not much gratify our readers by running through the common-places which he has copied from others, on the after treatment and prophylaxis. It will probably have been noticed, that he has omitted to say any thing of the use of blood-letting in idiopathic convulsions of children: he does not condemn the practice, but he has not once adverted to it. His use of anti-spasmodics is more free than is usual in this country, and we doubt whether the advantage to be gained from the employment of narcotics would compensate, even as far as he has stated, for the hazard which appears almost inseparable from them.

The work itself is of little value, and that for reasons to which we have already alluded. Its principal interest arises from the nature of the subject, and from the opportunity it affords of ascertaining the opinions of our neighbours on a subject which must be allowed to present considerable difficulties. It is on the latter account that we have confined ourselves exclusively to its more practical parts, and have left unnoticed all the incumbrances which custom has rendered it almost incumbent on writers to introduce into such works as the present.



ART. VIII.—*An Account of the Disease lately prevalent at the General Penitentiary.* By P. M. LATHAM, M.D. 8vo. London, 1825.

Independent of the interest naturally excited by the peculiar and alarming form under which the disease here treated of presented itself, Dr. Latham has, within a very small compass, comprised a great variety of valuable, and in many respects novel information, of which we shall attempt to give our readers an accurate idea, by following closely in our analysis, the plan of arrangement adopted in the work itself.

Drs. Latham and Roget were employed in the service of the General Penitentiary for fifteen months, from March 1823 to May 1824. It is unnecessary here to dwell upon the circumstances which rendered their appointment necessary, as our readers can scarcely have forgotten the agitation of the public mind, produced by the Reports of the state of the Prison at one time prevalent.

On the 5th April 1823, Drs. Latham and Roget made a Report to the Committee of the General Penitentiary, containing the results of their experience and observation at that time as to the nature, causes, and extent of the disease, some extracts from which will so far put our readers in possession of the facts relating to it, as to enable them to follow the subsequent parts of the Treatise without difficulty.

From this Report we learn, that during the last Autumn, (1822) the general health of the prisoners began visibly to decline; that they became pale, languid, and incompetent to their former occupations and exertions; such was the general state of the prisoners through the Winter.

"Notwithstanding this depression of strength, there appeared among them no manifest signs of any particular disease. The number of sick received into the infirmaries did not much exceed the proportion which, in the Winters of former years, it had borne to the total number of prisoners, and their disorders were those commonly incident to cold weather. It was not until the beginning of February, that any marks of scurvy were reported by Mr. Hutchinson, as having been noticed by him on a few individuals in the infirmaries. Between the 14th February and the 1st March, no less than 48 prisoners came into the infirmaries, affected chiefly with diarrhœa and dysentery. These were of a peculiar kind, and were suspected to have a connexion with the scorbutic disease. At this time also, all these various affections were found spreading ex-

tensively, but in different degrees of severity, throughout the prison."

When Drs. Latham and Roget began their inspection on the 1st March, they found

"The prevailing disease to be the same with that which is known by the name of Sea Scurvy, characterized by livid spots or blotches of the skin, especially on the lower extremities. Conjoined with the scurvy, in almost every case, there was diarrhoea or dysentery. There were, indeed, a few instances of scurvy without disorder of the bowels; and moreover, numerous instances occurred of diarrhoea and dysentery, where no marks of scurvy appeared. But still, whether the scurvy subsisted alone, or the diarrhoea or dysentery subsisted alone, or whether they were conjoined in the same individuals, there was found in all those who suffered from either, or from both, the same constitutional derangement, denoted by a sallow countenance, an impaired digestion, diminished muscular strength, feeble circulation, various degrees of nervous affections, as tremors, cramps, or spasms, and various degrees of mental despondency."

The Report next states that the physicians were confirmed in the conclusion to which these facts appeared to lead, namely, that the diarrhoea, dysentery, and scurvy, had their origin in the same morbid state of constitution, by finding on the dissection of two of the prisoners who died dysenteric, spots on the intestines of the same kind as those which on the skin constitute scurvy. More than one half of the prisoners were at that time affected by the disease, in one or other or all of its forms. The women were affected much more extensively than the men; and of both men and women, the second class, composed of those longest in confinement, was affected in a much larger proportion than the first class, comprising those more recently imprisoned.

After noticing the exemption of the prisoners (twenty-four) employed in the kitchens, and of the officers and their families, the Report proceeds to notice the period at which the disease might have been supposed to have commenced.

"We have fully satisfied ourselves," say the physicians, "that there existed among the female prisoners, a few cases of decided scurvy, as early as the month of November, (1822). It is certain, however, that it was not until after Christmas, that the scurvy had spread very extensively among either sex. About the middle of January, the instances had become numerous among the women; and among the men about the middle of February; and it continued to increase progressively in both sexes, until the first week in March."

After some further notices of the progress of the disease, the

Report proceeds to the consideration of its causes, and commences by stating the opinion of the reporters to be, that the situation of the prison had not contributed to its production, and for the following reasons :—

“ First, because, if this had been the case, it is reasonable to suppose that the same disease would have occurred in former years; whereas it had never occurred until the present Winter. Secondly, had this been the case, the officers of the prison, being equally obnoxious with the prisoners to any injurious influence of situation, could not have been universally exempt, as it appears they have been from the same disease. Thirdly, because, if the situation of the prison be injurious, it must be presumed to be so in consequence of marsh miasmata arising in its neighbourhood; yet, since its establishment, the prison has been altogether free from those diseases which marsh miasmata engender. Fourthly, because, marsh miasmata always arise during the hot, and never during the cold seasons of the year; and the diseases which they engender belong to the same seasons. Lastly, because although scurvy and dysentery have undoubtedly been found prevalent in marshy districts, yet when marsh miasmata have produced them, they have been associated with intermittent fevers, and have occurred only at the hot seasons of the year.”

Several of the circumstances already mentioned, induced the physicians to suppose that the causes of the disease must have been such as operated exclusively on the prisoners, during the existing season, and for the first time. One such cause appeared to present itself in an alteration of the diet of the establishment, during the last eight months from what it had ever previously been.

“ The change which took place in July last, reduced the animal part of the diet almost to nothing. In a soup made of pease or barley, ox-heads were boiled, in the proportion of one ox-head to a hundred male, and one to a hundred and twenty female prisoners; and we found upon inquiry, that the meat of one ox-head weighed upon an average eight pounds, which, being divided among a hundred, allows only an ounce and a quarter for each prisoner. This new diet had been continued until the present time; and to it we mainly ascribe the origin of the disease in question.”

This scanty diet was, however, not the only, though the principal cause, supposed by the physicians to have been in operation: with much probability they suggested that it had been assisted by the concurrence of others, and more particularly by the severity of the Winter.

Under this impression, the physicians state in their Report, that they ordered an immediate change in the nature of the diet, allowing a larger quantity of meat daily to each prisoner, toge-

ther with the use of oranges, as the cheapest and best anti-scorbutic to be obtained at that season. It is unnecessary to follow that part of the Report in which the physicians state their opinion as to the kind of diet best fitted for the prisoners in the Penitentiary, under ordinary circumstances, farther than to mention that they urged on the Committee the propriety of allowing it to consist of a larger proportion of animal matter, and in the solid form. They close their Report by stating their conviction that no obstacle remained to the entire re-establishment of the health of the Penitentiary, at the same time that they suggest the probability that occasional cases of disease might arise for some weeks.

"From this Report," says Dr. Latham, "it is obvious that we had no other opinion concerning the disorder, than that it consisted of a diarrhoea or dysentery, and a slight scurvy combined; that it had been produced by impoverished diet and a severe Winter; that it was already cured; and that, although occasional instances of relapse might be expected, the health of the prisoners would probably be re-established at no distant period.

"Further, the medical expedients hitherto employed had been very simple and very successful; and we could not impute a very formidable character to a disease which chalk mixture, and tincture of opium could cure.—This Report, as a medical document, was unquestionably premature, yet I candidly confess we had no such belief at the time.

"The conviction it expresses, that there is "now no obstacle to the entire re-establishment of the healthy state of the Penitentiary," was proved, by what speedily occurred, not to have been well-founded."

In addition too, facts which subsequently came to light, induced the physicians to doubt the correctness of the opinion which they had given as to the origin of the disease, although at the time satisfactory to themselves and to the Committee, and supported by that of many medical men who were examined upon the subject.

"The Report," says Dr. Latham, "had hardly been made public, when the disease, so far as it was referable to the bowels, began to re-appear; by the middle of the month of May it had again pervaded the prison; and by the middle of June, all the prisoners who had formerly suffered; all, with very few exceptions, who had been exposed to its presumed causes, yet had never suffered before; and all, with very few exceptions, who had been admitted into the Penitentiary since the presumed causes had been removed, were involved in the same calamity; and the remedies, which were formerly successful in controlling it, had not now the smallest beneficial influence."

That part of the disease, however, which consisted in a butic spots and blotches never returned.

*Symptoms.*—In what may be more strictly called the *part* of the work, Dr. Latham first treats of the scurvy as it sented itself in the Penitentiary. After alluding to the skin familiarly known by the name of goose-skin, and its pexion with insufficient food and clothing, Dr. Latham tions, that on their first visit to the Penitentiary, it at ontracted their attention, being found in almost every priu and to a very remarkable degree.

"In whatever part of the extremities this condition of skin most conspicuous, there were always found certain spots of a or livid colour, formed by blood extravasated beneath the cutis;

These spots were of various sizes, varying from that pin's head to large blotches of an irregular shape, and occing a considerable extent of surface. In a few cases there ecchymosis of the conjunctiva; and in a few, ecchymosis swelling of the upper eye-lid.

"The gums were spongy, soft, livid, and disposed to bleed all those who had extensive discolourations of the skin; and those who had mere specks and spots of ecchymosis, their ex tion, although it might not have been noticed under ordinary cumstances, was far from being healthy; they had a purplish and were tender, sore, and often ragged, just where they con application with the teeth. In a few, and especially in one, the mouth seemed in a state of absolute rottenness, the gums bl ing and broken down, the teeth loose, and their fangs half exp and the whole mucous membrane of the lips and cheeks black ragged, while a foul cadaverous smell was emitted with the brei

On this part of the subject it is unnecessary to say much the majority of the cases of scurvy were slight, and soon yie to the treatment recommended in the first Report. What Latham calls "the Bowel Complaints," were more formid and more intractable. He has spoken of them at great len and evidently with great regard to precision and accuracy. commences by stating, that the flux of the bowels constit only a part of the disease of the Penitentiary.

"The disease was neither a diarrhœa nor a dysentery sin nor did it belong exclusively to the bowels; but it belonged to whole system, and was very extraordinary, and as I believe, p liar in its nature."—p. 31.

Our limits do not permit us to copy the minute acc which Dr. Latham has given of the various forms of flux in Penitentiary, and we shall therefore confine ourselves to a n general view. The very various forms in which it prese

itself, may be imagined from the statement that, "there was every degree and species of flux that was ever seen or described." Some of the cases corresponded in the nature and the violence of the symptoms, to the accounts given of Indian Cholera. Dysentery existed in every kind and degree. Some cases differed from casual diarrhoea only in being intractable by common remedies. Others again had no correspondence with any known disorder, and appear to have been distinguished by the nature of the evacuations, which were of various kinds, but never with any resemblance to *fæces*, bile, blood, or mucus.

The probable event of particular cases was not found to bear any relation to the kind of flux: there was equal danger in the simple diarrhoea, in cholera or dysentery. In some cases the abdomen was partially distended, chiefly about the epigastric region; in others universally distended and tympanitic, and more particularly so among the women.

With regard to pain, there was considerable variety; in some cases there was pain only before, and in others after evacuations. There was a very general complaint of *sinking at the pit of the stomach*, existing not only during the bowel complaint, but before its existence, and after recovery from it. Dr. Latham is inclined to believe that the sensation described in these terms, consisted of a certain degree of actual pain, combined with a feeling akin to approaching syncope, and spreading from the stomach as from a centre.

The tongue was in the great majority of cases, clean, moist, and of its natural colour, whatever might be the kind of flux. The exceptions were very few. The pulse in a few cases had frequency and strength enough to require bleeding or other means of depletion; but in the great majority of cases, it gave no such indication, or had no morbid character whatever.

One of the most embarrassing circumstances in the disease, was the little information to be gained from the symptoms, which were all ambiguous and uncertain.

The appearances on dissection which appeared characteristic, were ecchymosis, congestion of the small vessels, and ulceration; all of which Dr. Latham has described with great minuteness. The ecchymoses were always small and few in number; in no instance larger than a pea, or exceeding five or six throughout the intestines.

"Some died of long-continued and incontrollable diarrhoea, in whom no other morbid appearance was found after death, than a few of these small spots of ecchymosis."

The congested portions of intestine were peculiar, in assum-

ing the form of small patches more distinctly circumscribed than customary.

"There were perhaps, in the course of the intestines, half a dozen of these patches, each an inch or two in diameter, and of deep uniform red, while the membrane in the neighbourhood retained its natural pale colour."

Their uniform red colour gave them the appearance of spots of extravasated blood, but when held up to the light it was evident that the blood was still contained within the vessels.

The ulcers were generally few in number, and scattered at distant intervals through the track of the intestines. Most frequently they were circular, not exceeding the diameter of a pea, but sometimes large and irregular, occupying a space of one or two inches.

"They did not appear in the midst of an inflamed surface, but were circumscribed and distinct, while the mucous membrane in their neighbourhood, was of a perfectly natural colour."

The ulcers appeared to correspond to the spots of ecchymosis and congestion, not being observed without one or other of the two. The vascular patch was sometimes found apparently in a state of transition into an ulcer. The ulcers were also sometimes found in progress towards reparation: though we believe Dr. Latham to be wrong in supposing the resulting appearances to have been hitherto undescribed. There did not appear to be any strict correspondence between the particular forms of disease, and the morbid appearances existing in individual cases.

*Treatment.*—After the description of the changes of structure in the cases of bowel complaints, Dr. Latham proceeds to shew the mode of treatment. During the first month of the attendance of the two physicians, the disease disappeared under a treatment which consisted in the use of chalk mixture and tincture of opium, assisted by the influence of a sufficient diet.

"But when the flux returned at the end of April, it was no longer amenable to the same remedies. Not even in those cases which bore the character of simple diarrhoea, did chalk mixture and tincture of opium procure the smallest relief. No effectual good was derived from practice directed to the simple purpose of restraining the flux, even where this was the only indication to follow."

As little benefit was attained by the employment of remedies suited to the symptoms existing in individual cases; as for instance, bleeding, blistering, fomentations, &c. when there was pain on pressure, fever, &c.

"But little abatement, even of the pain, ensued, and none what—

ever of the other symptoms, or of the flux. Where there was simple colic pain, all the methods of soothing were employed, by opium, fomentations, &c. ; but the consequence was only a brief respite from suffering, while the flux continued."—p. 59.

Equally little advantage resulted from the empirical employment of astringent bitters, aromatics, mucilaginous drinks, antimonials, and ipecacuan. The latter was unsuccessful, whether given in small doses repeated, or in larger ones, combined with opium, or infused in water and used as an enema.

"Some temporary benefit was derived in a few instances from glysters of starch and opium, or opium with liq. plumbi acetat. dilut. but they did no permanent good."

Drs. Latham and Roget were at first deterred from the use of mercury, from having understood that on the first appearance of the flux, it had failed after a fair trial, and from the circumstance of the latter having been originally combined with scurvy, a form of disease in which the use of mercury has been most positively denounced by the best authorities. The progressive increase of the disease, however, the alarming character it assumed, and the absolute inefficacy of other measures, induced them to make a cautious trial of it. They commenced with the cases which experience had shewn them to be most dangerous.

"Those of mere passive diarrhoea, where there was no excitement of the circulation, little pain, and little of morbid quality in the evacuations, except that they were enormously frequent, and hitherto absolutely incontrollable."

Our limits do not permit us to follow Dr. Latham in his account of the gradual and cautious manner in which they proceeded in the trial of this heroic remedy. It is enough to say that it succeeded, and that salivation uniformly appeared to be a condition essential to its efficacy.

"The success of mercury under these unpromising circumstances led first to the more general, and finally, to the universal employment of it. We resorted to it in every case of flux, where the remedies hitherto used had not satisfied our expectations. In short, we resorted to it in every case without exception."—p. 69.

The extent and the freedom of the use of mercury were regulated chiefly by the nature and danger of the different forms in which the affections of the bowels presented themselves. When tormina, colic, or cramps of the stomach were present, when the attack was sudden and recent, recourse was had to large doses of mercury, such for instance as fifteen grains of calomel and two of opium; the same quantity, or one half, or a still smaller dose being repeated on the following day, and continued if necessary.



"Sometimes," says Dr. Latham, "the day after the first large dose of calomel and opium, we found the patient exulting that he had been cured as by a charm; that he had slept all night, and that his pains were gone; and that he had had several evacuations, of which the two or three last were almost natural. With this sudden improvement, salivation had either already arisen, or it was at hand. Under these circumstances, the use of mercury was either suspended altogether, or small doses of calomel and opium were given until ptyalism appeared, which was generally obvious at our next visit."—p. 72.

There was considerable variety in the manner in which mercury proved beneficial in these cases. In some it was not productive of any particular action, (salivation excepted) the symptoms vanishing gradually and singly; in others, on the contrary, the salutary effects of the medicine appeared connected with a sudden and vigorous effort, approaching to what is commonly understood by a crisis.

"Sometimes the critical effort commenced as soon as the mercurial fœtor was perceptible in the mouth. Sometimes salivation would exist twenty-four hours before the crisis began: and sometimes the crisis preceded the salivation twenty-four hours. But it never took place but where there was salivation at the time, or immediately before or immediately after."—p. 74.

This critical effort commenced by severe griping with a feeling of distention and filling of the bowels, followed by uncontrollable urgency to stool. The motions became entirely changed. Instead of blood or slime, or colourless turbid fluid, they were composed of a "colluvies of the foulest, blackest matter, and of every kind; heavy ropy mucus and bile formed a considerable part of them."

These evacuations were followed by great relief, but it generally happened that the paroxysm was repeated and terminated in the same manner.

"Thus, after a night spent in a succession of these critical paroxysms, the patients were found the next day, bathed in a warm perspiration, and fast asleep; and from this time the evacuation from the bowels became natural and healthy."

*Cerebral Affections.*—The disorders of the brain and nervous system, formed a very peculiar character of the disease of the Penitentiary as it ultimately developed itself. Dr. Latham, with the candour characteristic of talent and principle, readily admits that it was only gradually that the comprehensive nature of the disease was ascertained, and that the physicians were induced to regard it—

"Neither as a dysentery nor a diarrhœa simply, nor belonging

exclusively to the bowels, but pervading other organs and systems of organs, and in fact belonging to the whole constitution."

In the Report of April, 1823, tremors, cramps or spasms, and various degrees of mental despondency, were mentioned among the signs of constitutional derangement, in which light only they were then considered.

"In process of time, however, disorders of the brain and nervous system became more and more frequent, and of various kinds; headache, vertigo, cramps and twitching of the limbs, delirium, convulsions, and apoplexy. But since these disorders did not immediately discover themselves in all their variety and magnitude, it was not until after much observation, that we were enabled to tell their genius and character, and to know that they constituted one form of the predominant disease; that they were not contingent upon the flux, nor the flux upon them; that either might exist separately, although they were generally found in combination; and that both arose from a morbid condition essentially the same, but falling upon different parts."—p. 79.

Our space will not permit us to follow Dr. Latham in the very instructive detail of the progressive manner in which the physicians were led to such conclusions, by the occurrences which presented themselves.

The forms of nervous affections were not only various, but also violent, distressing, dangerous, and, not uncommonly, fatal. Apoplexy, mania, phrenitis, spasms, and cramps approaching to tetanus were the most remarkable. Three fatal cases occurred in March, 1823; and at the end of April, when the bowel complaints, after a temporary subsidence, re-appeared more extensively than before; nervous affections of every kind also presented themselves, and more especially of that kind, which betrayed itself in cramps of the muscles. Ultimately the various nervous affections prevailed as extensively in the Penitentiary as the bowel complaints themselves. The various forms of nervous affections were also found combined in every possible way with the various kinds of bowel complaints, as they have been already described. The cases of phrenitis appear to have been peculiar and insidious;

"To a sudden and acute pain of the head were added, first, vertigo, then bewilderment of the intellect, then twitching of the tendons, then strabismus and dilated pupils; and lastly, distortion of the mouth and hemiplegia. In almost every case the pulse was most feeble: there was the disease, without the force of circulation which is deemed essential to maintain it: there was the disease, and at the same time, a prohibition of the remedy which is deemed essential to its cure. In a few cases, we ventured to try the effect of bleeding from the arm, sitting by the patient while the operation was

performed: and thus, perhaps, when four or five ounces had flow the pulse would falter, and we were compelled to stop; or we were compelled to stop when hardly a single ounce had been I am sure there was no good derived from this practice, but v all our cautions, I am not sure there was no evil. We put leec upon the forehead, and found them of very uncertain effect. was to extensive blisters on the head and its neighbourhood, 1 for the present we were obliged mainly to trust; and these reme would check the symptoms, and postpone the progress of the ease, if they were fortunately employed so as to take effect at time of its earliest formation."—p. 89, 90.

*Post Mortem Appearances.*—The appearances found a death, were some degree of vascular fulness of the brain its membranes, and some watery effusion between the m branes, and into the ventricles. Both were generally inco derable; and in some clearly marked cases, there were at lutely no morbid appearances.

*Effects of Mercury.*—Mercury proved as powerfully eff cious in the cure of the nervous affections as of the bc complaints. At the time that the physicians resorted to its the following was the state of the prison, as regards the nerv affections:—

"Seven had already perished under our own observation: whom, one died apoplectic, one maniacal, two with symptom phrenitis, two from cramps referable to the region of the stom and heart, and one from symptoms belonging in part to the he and in part to the brain; and there were not less than two hum labouring under various degrees of disorder belonging to the s organs."—p. 106.

The physicians appear to have been guided to the use mercury, partly by the conviction which they had acquired the natural alliance between the nervous disorders and bowel complaints, and partly by finding—

"That many patients, in whom mercury was first successful employed for the cure of diarrhœa were likewise freed from tain obscure nervous complaints; some from headaches, and s from vertiginous sensations."

Our limits will not allow us, nor do we deem it necessary enter minutely into the details which Dr. Latham has give the manner and cautions adopted in the administration of remedy. We may state generally that they were guided by urgency and severity of the cases which presented themsel and of which experience had taught them to estimate the ger. Salivation appears to have been equally necessary as the cure of the bowel complaints, not, as Dr. Latham ju remarks, on account of any specific benefit connected with

but as affording the only unequivocal evidence of the mercurial action; and in accordance with this idea, he observes, that no particular degree of salivation was required to ensure the efficacy of the treatment.

“ The beneficial influence of mercury upon that part of the disorder of the Penitentiary, which belonged to the brain and nervous system, soon became as unquestionable as upon that which belonged to the bowels. It was proved upon the various forms, both of one and the other, and most conspicuously upon that form of each which occasioned us the greatest present alarm. Before the use of mercury, it was impossible to contemplate the state of the prison, and not consider an extensive mortality as inevitable. Experience of its effects during a fortnight, entirely changed our anticipations of the result, and encouraged a hope, that with great care and vigilance in its administration, the mortality would still be kept within narrow bounds. Thus, for every species of nervous complaint, as for every species of flux, whether they were combined or separate, for either might occur alone, although they were generally found together, we were led by our own experience to the employment of mercury.”—p. 111.

*Febrile Affections.*—We must pass more briefly over the remaining part of this truly valuable treatise. The fifth chapter contains an account of the fever which presented itself as a part of the disease of the Penitentiary. Dr. Latham commences by stating that wherever fever was present in combination with other forms of the disease, the connexion was of such a kind as to raise a doubt whether the fever was idiopathic or symptomatic. He is himself inclined to believe that it was of the former kind, though obscured by its association with the other forms of disease.

“ It was a fever of moderate excitement, and generally went off in three or four days by perspiration ; or, if it failed of such relief, either spontaneously or by the help of medicine, it was apt to be protracted in the form of hectic during several weeks.”—p. 117.

“ In many cases, a slight shivering followed by heat and languor, and want of appetite, and a pulse ranging between 90 and 100, constituted the whole disease, and the use of common salines constituted its whole treatment. The patients being put to bed, began to perspire, and in three or four days they were well, with little loss of strength. In other cases, to the common symptoms of fever, were added pain at the pit of the stomach and headache ; which, together, constituted the whole disease. In these cases, an emetic, or a brisk purgative, followed by saline medicines, operated a speedy and effectual relief. Thus, when the stomach and bowels were cleared, and perspiration promoted, the patients were well in three or four days, with little loss of strength.”

“ With two or three exceptions, in which the lungs were affect-

ed, the stress of the disease fell always either upon the stomach and bowels, or upon the brain, or upon both together; and in those who died, the brain, or the stomach and bowels, presented the signs of recent disease. For the symptoms referable to these parts were as mild as they generally were, were yet aggravated to an alarming degree in several instances, and were rapidly fatal in a few."—p.

When the fever assumed the form of hectic, Drs. Latham and Roget were induced by their experience, to resort to the same remedies, and found them more beneficial the earlier the period at which they were administered.

"The salutary effect of such remedies was most strikingly manifested in those cases, where the accession was marked by symptoms of peculiar severity, referable to the head or the epigastric region. After these symptoms were dissipated by the means already pointed out, bark and acids were required to prevent the fever from becoming a slow hectic of many weeks duration. And, if the hectic already begun, and continued for a time, bark and acids were the medicines which sustained the patient under it, and brought it safely through it."—p. 136.

"In the cases in question, the whole secret of conducting the fever to a successful termination consisted, first, in not being deterred from using plentiful evacuations in the earliest stage, in the account of the sudden pallor, faintness, feeble pulse, and apparent exhaustion (symptoms derived from the present oppression of the particular organs); and next, in not withholding bark and acids, (remedies which sustained without eating,) as soon as the evacuation had relieved the internal oppression, and nothing but the fever and its symptomatic sweats remained."—p. 137.

*History of the Disease.*—Having thus given a tolerably extensive view of the form and symptoms with which the disease presented itself, we shall treat more cursorily of the remaining subjects of the volume more immediately connected with history and progress. A chapter devoted to the subject of the tercurrent diseases, though short, appears to afford proofs that they were to a certain extent modified by the predominant influence of the disease of the Penitentiary.

The following Tables will serve to shew the extent of the disease at various periods of 1823.

Prisoners under medical treatment on the 15th of May, 1823:

|                       | Men.      | Women.    | Total.    |
|-----------------------|-----------|-----------|-----------|
| Diarrhoea { Ill. .... | 46        | 44        | 90        |
| { Better ....         | 48        | 87        | 135       |
| { Well. ....          | 49        | 20        | 69        |
| Other complaints .... | 21        | 30        | 51        |
|                       | <hr/> 164 | <hr/> 181 | <hr/> 345 |

On the 23d of May :—

|                       | Men.      | Women.    | Total.    |
|-----------------------|-----------|-----------|-----------|
| Diarrhœa { Ill. ....  | 63        | 46        | 109       |
| { Better ....         | 51        | 56        | 107       |
| { Well. ....          | 64        | 47        | 111       |
| Other complaints .... | 24        | 36        | 59        |
|                       | <hr/> 202 | <hr/> 184 | <hr/> 386 |

On the 11th of June :—

|                       | Men.      | Women.    | Total.    |
|-----------------------|-----------|-----------|-----------|
| Diarrhœa { Ill. ....  | 73        | 35        | 108       |
| { Better ....         | 86        | 38        | 124       |
| { Well. ....          | 82        | 88        | 170       |
| Other complaints .... | 24        | 28        | 52        |
|                       | <hr/> 265 | <hr/> 189 | <hr/> 454 |

On the 3d of July :—

|                       | Men.      | Women.    | Total.    |
|-----------------------|-----------|-----------|-----------|
| Diarrhœa { Ill. ....  | 17        | 22        | 39        |
| { Better ....         | 70        | 37        | 107       |
| { Well ....           | 179       | 83        | 262       |
| Other complaints .... | 8         | 22        | 30        |
|                       | <hr/> 274 | <hr/> 164 | <hr/> 438 |

In these Tables are designated as "Ill," those whose disease either progressive or stationary; as "Better," those who had *ady* lost some symptoms of their disease, and made some *ade* towards health; and as "Well," those who were well, so *as* they were free from symptoms of disease, yet not *strictly* inasmuch as they were judged still prone to relapse, and were the subjects of medical observation and care.

It is necessary to observe respecting these Tables, that they *he* same which were presented to the Committee. In them *rhœa* alone is mentioned, being put for every species of flux *h* has been described, and as separate enumeration is made of *ous* complaints, and of fevers, which have been considered as *disease* of the prison, equally with the flux of the bowels. The *is*, it was late before we ourselves arrived at the conclusion they really were so. Hence, when they occurred alone, and was rarely the case, they were placed among the "other com-*its*," or accidental disorders of the prison, until they were *ainly* known to be peculiar to it; and when, as it happened in *great* majority of cases, they were combined with bowel com-*its*, it was thought enough to specify the more notorious *ase*."—p. 155.

During the attendance of Drs. Latham and Roget at the Penitentiary, thirty prisoners died; of whom thirteen were men, and seventeen women.

"Twenty-two fell victims to the disease, in some of its forms, and the remaining eight to complaints which had only a suspected connexion with it, or none at all."

Of the thirteen men :—

- " 7 Died of the various species of bowel complaints.
- " 2 — of disorders of the brain and nervous system.
- " 2 — of fever.
- " 1 — of abscesses, which had a suspected connexion with the reigning disease.
- " 1 — of struma, which had no connexion with it.

Of the seventeen women :—

- " 4 Died of the various species of bowel complaints.
- " 5 — of disorders of the brain and nervous system.
- " 2 — of fever.
- " 1 — of hepatitis, which had a suspected connexion with the reigning disease.
- " 1 — of diseased spine, which had no connexion with it.
- " 4 — of phthisis, which had no connexion with it."

These Tables were annexed to a Report dated July 4, 1823, the nature of which is thus explained by Dr. Latham :—

"Our purpose in this Report was to intimate to the Committee, that the disorder *as a flux*, had been of longer standing in the prison, than we had at first been led to believe; that its origin could not be *exclusively* owing to those causes to which it had been imputed; that there had been, and perhaps still was, some cause in operation, the nature of which had not been discovered, and might not be discoverable; that there was a suspicion of contagion, and a suspicion of local injurious influence, but nothing ascertained about either; that the extent of the disease was at present greatly diminished, but that all the prisoners were in a state of health, which (to say the least) was dangerously valetudinary; that disease was still to be expected in some form, either in the shape of relapse, or of some new epidemic, or of those various complaints which are the consequence of debility."—p. 163.

At the same time, Drs. Latham and Roget, from a sense of the importance of the subject and the painful responsibility imposed upon them, begged to have the advantage of the assistance of other physicians of eminence and authority. The College of Physicians having been applied to by the Secretary of State, appointed Drs. Hue, Macmichael, and Southey, for the purpose, who all participated in the subsequent service of the Penitentiary.

At the same time Drs. Latham and Roget joined in recon-

mending the removal of the prisoners from the Penitentiary for the purpose of change of air. This recommendation was partially complied with; 120 females being removed to the Ophthalmic Hospital in the Regent's Park, between July and the beginning of August; and 200 males to the *Ethalion* hulk, at Woolwich, between the middle and end of August. The prisoners selected for removal were those who had suffered the most severe and the most frequent attacks of the disease in all its forms. Notwithstanding this circumstance, the improvement amongst them in a fortnight was obvious; whilst, on the other hand, those who remained at the Penitentiary, were stationary as to their general health, and were still liable to visitations of the former disease, though in less violent forms.

On the 20th of September, the physicians reported to the Committee, that

"The habit of all the prisoners, both at Woolwich and the Regent's Park, is strikingly improved, and the majority have recovered the appearance of robust health. In this number many are included, whose lives had been brought into hazard by successive attacks of the disease in its several forms, and who at the time of their removal were in a state of great debility."—p. 170.

Another month elapsed, and the prisoners at Millbank, although they were suffering no formidable disease, still experienced some insurmountable impediment to the recovery of their health. Ultimately, on the representation of the physicians, (Drs. Latham, Roget, Hue, and Southey,) the women, whose number was reduced to eighty, by pardons, were on the 14th of November, removed on board the *Narcissus* hulk, and between the 8th and 10th of December, the men, reduced to 281, were put on board the *Dromedary*.

Dr. Latham states, that comparatively, the females at the Ophthalmic Hospital received less benefit from their removal than the men, who had been transferred to the hulks at Woolwich.

"Immediately after their removal, both alike seemed to throw off the remaining symptoms of their disease, and to put on the appearance of returning health; yet both afterwards continued alike to suffer an occasional recurrence of their disease, chiefly in the form of diarrhoea. There was, however, this manifest difference between the two, that while those on board the hulks at Woolwich continued to recover their general health, in spite of frequent occasional attacks of diarrhoea, the females at the Regent's Park did not, in respect of their general health, go on to improve during more than the few first weeks after their removal. Moreover, among the prisoners on board the hulks, during a period of between four and five months, there had not occurred a



single case of formidable disease; whereas among those at the Regent's Park, during the same period, there had been several."

Some cases of the insidious phrenitis already mentioned occurred there, and nearly proved fatal, yielding to mercury only, under the care of Dr. Roget. Under these circumstances the women at the Regent's Park, then reduced to 91, were on the 21st and 23d of January, 1824, placed on board the *Heroine* hulk.

On the state of the prisoners from the Penitentiary when removed to the hulks, Dr. Latham remarks that

"Although transferred at various times, and at different seasons of the year, all experienced a striking change for the better, almost immediately upon their arrival at Woolwich, and that their disorder ceased for a time. When they had been on board ten days, we found scarcely any complaint among them. This speedy amendment, which uniformly followed change of air and place, held out at first a most encouraging prospect. But in every instance it was fallacious; for after a temporary pause, the disorder returned in the form of diarrhœa. It was mild in its symptoms, but still it was evidently the same which had prevailed at Millbank. Another remarkable circumstance was, that neither the total absence of the disorder during a considerable period, nor the complete re-establishment in the mean time of the general health, furnished any security against its recurrence. The men on board the *Ethalion* were under our observation during three quarters of a year after their removal, and among them were many, who having been free from all symptoms of complaint during two, three, four, and even five months, and having in the mean time recovered robust health, again suffered diarrhœa."—pp. 177, 178.

The women who had been placed on board the *Narcissus* in November 1823, rapidly recovered their general health, and had been strikingly exempt from their former complaints—

"When in the month of March, there were found among them numerous instances of disorder, expressly referable to the stomach. There was a sense of sinking, with extreme pain over the whole epigastric region, great impatience of pressure, and enormous distention of the abdomen, violent retching, with the rejection in several cases of pure florid blood. The blood was generally small in quantity, but in a few instances, it amounted to more than a pint. The pulse was feeble; neither food nor medicine would main upon the stomach; both were rejected, with extreme aggravation of all the symptoms."—p. 185.

Perhaps the most satisfactory proof of the connexion of the affection, with the disease of the Penitentiary, may be found in the fact that it yielded to mercury only, combined with opium and given in small quantities at short intervals, until the throat became perceptibly sore. In ten days this form of disease

tacked half the women on board the *Narcissus*, the others suffering at the same time from some of the affections formerly prevalent at the Penitentiary, and scarcely an individual escaping an attack of severe illness, though none died.

The females appear throughout to have suffered most severely from the disease and its consequences, and to such a pitch had their mental and bodily distress arrived, and so little probability was there of any improvement of their condition whilst in confinement, that Mr. Secretary Peel, with equal judgment and humanity, was induced to recommend them all to the mercy of the Crown for pardon.

The men, though still liable to occasional attacks of diarrhoea, appear to have been more fortunate, and, by the Reports of the medical officers of the hulks, appear ultimately to have attained an equally good state of health with others in the same situation.

*Origin of the Disease.*—The ninth chapter treats very fully on the origin of the disease, and contains a relation of some circumstances, which may perhaps appear as singular to our readers as they do to us. In the Report of the 5th April, 1823, the physicians ascribed the origin of the disease *exclusively* to an impoverished diet and a severe and protracted Winter. The progress of the disease, and a more extended experience of its nature, led them to modify this opinion, by stating to the Committee, in their Report of July 3d, 1823,

“That there was some cause in operation, over and above those to which they had originally imputed the disease; and that there was a suspicion of contagion, and a suspicion, moreover, of an injurious influence peculiar to the place.”—p. 201.

*Contagion.*—The facts which led them to suspect contagion, were, first; that subsequent to the Report of April, 1823, the disease extended to several officers of the establishment, especially those who had frequent intercourse with the sick.

“Twelve males and six females of this class suffered the same forms of disease with the prisoners. The chaplain also, and various individuals of his family, residing within the Penitentiary, had the disease in the form of a bowel complaint, himself (as he believed) in consequence of his attendance upon the sick prisoners, and his family (as he believed) in consequence of a female, selected from among the prisoners to become his servant, being received into his house, before she had entirely recovered from the disease, which she had suffered in the form of bowel complaint and slight scurvy:”—

2dly; Prisoners admitted into the Penitentiary since the

causes first assigned to the disease had ceased to operate, were nevertheless, liable to its attacks.

"The diet was changed on the 1st of March, and fresh convicts had been received into the Penitentiary during the latter part of February. From the 16th of February to June, 132 prisoners were admitted, namely, 127 males and five females: of these 103 suffered the disease, namely, 98 males and five females.

Subsequently to the removal of the prisoners to Woolwich and the Regent's Park, there were some other circumstances which were supposed to have afforded additional support to the idea of contagion, but which we shall pass over, as Dr. Latham considers them altogether equivocal, and capable of being explained on other suppositions.

The question of a noxious influence peculiar to the place, is one of the most interesting points connected with this singular disease, and one which we conceive that Dr. Latham has fully succeeded in establishing. The facts in support of it are chiefly to be found in a Report presented to the Committee on the 11th of Oct. 1823, and signed by Drs. Latham, Roget, Hue, Mac-michael, and Southey. Its object is expressly the origin of the disease, and it contains notices of the Reports made on the state of the prison, previous to the occurrence of the epidemic, with the view of proving the existence of forms of the disease, similar to, if not identical with it.

"In a Report after a general Inspection, dated Oct. 2d, 1820, among 47 cases of various diseases then in the infirmary, five cases of diarrhœa are mentioned without comment. In a similar Report, dated Nov. 2d, 1821, a single case of diarrhœa is mentioned, which proved fatal, but without comment. Jan. 6th, 1822, a dangerous case of dysentery is mentioned; and Feb. 2d, 1822, a fatal case of diarrhœa, referring to the same individual. June 4th, 1822, two fatal cases of diarrhœa are mentioned, and a dangerous one which proved fatal the next day. July 2d, 1822, a fatal case of diarrhœa. From July, 1822, to Jan. 1823, there is no allusion to a single case of diarrhœa, but on the 10th of the latter month "a few more cases of diarrhœa" are spoken of: in February, scurvy and flux are said to be gaining ground, and in the beginning of March, these two diseases pervaded the whole prison."

Thus in two years and eight months immediately preceding the epidemic, the authentic records of the Penitentiary contain notices of only eleven cases of similar character to it; of which cases, six proved fatal.

Taken singly, these Reports would be insufficient to authorize the assertion, that previous to the epidemic, there had been any

disease in the Penitentiary of similar character and symptoms. When viewed, however, as they should be, in combination with the Apothecary's day-book and some similar documents, they appear to furnish most incontestable evidence of the fact that flux had been a very prevalent disorder in the Penitentiary, from the period of its establishment, in 1816. With regard to this day-book also, we request our readers to bear in mind, that though the origin and nature of the disease had been a subject of anxious inquiry, at least from the time of the appointment of the physicians, in March, 1823, it was not produced by the Apothecary until a few weeks previous to the Report of Oct. 11th of the same year, and that until then, they (the physicians) had no knowledge whatever of its existence. From this day-book the following table was constructed:—

|                      | 1816 | 1817 | 1818 | 1819 | 1820 | 1821 | 1822 |
|----------------------|------|------|------|------|------|------|------|
| Prisoners . . . . .  | 72   | 212  | 246  | 351  | 609  | 798  | 866  |
| Cases of } . . . . . | 23   | 104  | 106  | 82   | 85   | 87   | 88   |
| Diarrhoea }          |      |      |      |      |      |      |      |

It is right to remark, that the nature of the cases was inferred from the remedies employed in their treatment; but in this respect there is little probability of error; as the remedies in question are of a peculiar nature, and as the conclusions drawn from them appear to have been strengthened by the evidence of the Apothecary, Mr. Pratt. From the same documents, too, it appears that the diarrhoea in question was pertinacious and intractable.

“The same prisoners were again and again brought under medical treatment for it in the same year. Many of the patients of one year, are found to have been the patients of the preceding year, and as the period becomes more and more remote from the first establishment of the Penitentiary, we find prisoners still suffering diarrhoea, who had already endured it one, two, three, or four years.”—p. 215.

The remedies from which the prevalence of diarrhoea previous to the epidemic was inferred, were “Mist. Cretæ,” and “Pulv. Cretæ:” the former a compound of chalk mixture, aromatic confection, tincture of calumba, and laudanum; the latter, the Pulv. Cretæ Comp. c. Opio. If any one could doubt the disease for which such remedies were administered, nothing can be objected to the following extract from the evidence of Mr. Pratt, before the Committee of the House of Commons.

“Question.—Do you give the chalk mixture for any disorder but diarrhoea? Answer.—No!!”

Certain parts of Mr. Pratt's conduct with relation to this

subject, are calculated to excite considerable surprise, though only lightly touched upon by Dr. Latham. Previous to the period at which he produced his books, as already mentioned and whilst under examination before the Committee of the House of Commons, in 1823, he referred to a letter of his written in March, 1822, when the change in the diet of the Penitentiary was under consideration, and in which he predicted that such change would be productive of the disorders which actually succeeded it. Much credit was allowed to and assumed by Mr. Pratt for this piece of prophecy. Drs. Latham and Roget, however, not placing much faith in this intuitive acquaintance with future events, took the liberty of viewing the matter in another light, and to use the language of the former, "Felt quite certain, that the prophecy could have had no other foundation than in the *bona fide* experience of the prophet."

They suppressed their own persuasion until such time as they had obtained proofs which might be convincing to others: such proofs, as already mentioned, were discovered in the books of Mr. Pratt, by whom these books were produced voluntarily. It deserves notice, however, that though himself well aware of the prevalence of diarrhoea in the prison previous to the epidemic, he did not bring them forward until after the suggestion of Dr. Macmichael, that the disease had existed in the prison from remote period, and until the investigation founded on it had been carried on to such an extent as to afford tolerably decisive evidence of its correctness.

"At length," says Dr. Latham, "the books in question came to light; and in them it appeared, by the testimony of Mr. Pratt's own hand-writing, that at the very time he was prophesying to the Committee, that certain diseases would take place upon their projected change of diet, he had been already prescribing largely for those very diseases ever since the foundation of the prison, for six years in succession. Knowing that bowel complaints had always been prevalent in the Penitentiary, he came to the obvious and just conclusion, that they would become still more so, if the diet was rendered less nutritive than it was."—pp. 222, 223.

The books explained another circumstance. It was easy to see how the apothecary could foretell the consequences of the change of diet; but not so easy to understand how it happened that the medical superintendent should not have any such anticipation. It was found that the prisoners for whom chalk mixture, &c., were ordered, were, for the most part, under Mr. Pratt's exclusive care.

"More than half the number had medicine given to them while they were following their ordinary occupations in the prison. The

functions of the medical superintendent, and the apothecary, were so far divided, that while the daily business of the former was only with the prisoners in the infirmaries, in prescribing for their severer maladies, that of the latter was with the prisoners in the Penitentiary at large, in prescribing for various ailments which did not require their removal into the infirmaries. Further, the medical superintendent had nothing to do with the prison, except to make a general inspection of it, accompanied by the apothecary, once a month, when it is probable, that the numbers taking chalk mixture were not so regularly reported to him as to make him sensible how constant and extensive the prevalence of diarrhoea had been within its walls."—p. 225.

So far, the proof deduced from the apothecary's books relate only to the prevalence of flux previous to the epidemic: from the same source, however, coupled with the explanatory testimony of Mr. Pratt himself, there was sufficient reason for inferring the existence of various forms of nervous disorders during the same period.

"We needed nothing," says Dr. Latham, "but the record of the medicines prescribed, to ascertain the prevalence of bowel complaints in the Penitentiary since its foundation: but we were indebted to the *voluntary* suggestion of Mr. Pratt, for enabling us to trace out, respectively, headache and vertigo, through every page of his own books. So confident was he, from a knowledge of his own method of prescribing, that certain remedies there recorded, were given by him for headache and vertigo, that he undertook to draw up, and actually did draw up, a list of the numbers afflicted with these disorders, from the establishment of the Penitentiary to the present time. These numbers were almost as great as of those who suffered the bowel complaints in every year."—p. 227. "Chalk mixture and tincture of opium could only have been prescribed for a flux of the bowels, and therefore unequivocally denoted that disease. But emetics might have been prescribed for various other complaints than headache and vertigo, and therefore could not be shown to denote their existence without further explanation, and without the express testimony of the prescriber himself.

"Now, concerning the circumstance last stated, it is too little to say, that it merely confirms the inference of the Report; it does more. If you admit as evidence that only which the books, upon the very face of them, prove, you must conclude that a disorder of the same general character with the late epidemic, has prevailed in the prison since its establishment; and we went no further in our Report. But if, moreover, you admit the explanatory testimony of the apothecary, you must go near to allow that the disorder which so prevailed there was *identical with* the late epidemic.—p. 228.

"The form of certain entries in the books gave, perhaps, a more

certain assurance that diarrhoea was the predominant complaint of the prison, than any that could have been derived merely from their numbers. Among frequent entries of medicine delivered to individuals by name, there were occasional entries of chalk mixture, sent by quarts and half gallons, to companies of prisoners working together at their various employments. Here it is quite evident, that among these several companies, there was a predominant disorder requiring to be treated by one and the same remedy, and that, from the nature of the remedy, the disorder was diarrhoea. It is evident, also, that in each company, the cases were so numerous, that it became needless, or impossible, to specify the individuals who should take the medicine. The medicine, therefore, was delivered out in large quantities, with general directions (we may presume), that it should be taken by all, or by as many as required it."—p. 231.

Dr. Latham does not pretend positively to exclude the influence of contagion in the propagation of the disease, though his opinion appears to be rather opposed to the intervention of any such influence.

"Thus," says he, "with regard to the disease of the Penitentiary, my colleagues and myself have held the belief of contagion less confidently in proportion as facts have arisen, which go nearer to impute an injurious influence to situation."—p. 238.

The few remaining pages are occupied by a refutation of an attempt made by Mr. Holford, visitor of the Penitentiary, to contradict that part of the last Report of the Physicians, in which they establish the existence of disease in the Penitentiary from its first establishment, and previous to the epidemic. This refutation, though complete and temperate, is, necessarily, controversial, not to mention that we have already laid before our readers the principal facts upon which it rests.

It must be superfluous to say, that Dr. Latham's account of this singular and formidable disease, is a work of very unusual merit, and equally creditable to him and the learned body of which he presents such a favourable specimen. It is distinguished by accurate judgment, precision, the absence of all affectation, and an easy but dignified style. In a very limited space it comprises a vast quantity of very important matter; and we think that there is little chance of our being mistaken, when we assert that it will ensure the author a conspicuous place among the great practical writers, who have always formed the most conspicuous ornament of the English School of Medical Science.

**ART. IX.** *The Elements of Medical Chemistry; embracing only those branches of Chemical Science which are calculated to illustrate or explain the different objects of Medicine; and to furnish a Chemical Grammar to the Author's Pharmacologia.* By JOHN AYRTON PARIS, M.D., &c. &c. &c. London, 1825.—pp. 625.

In ancient times the physicians were all natural philosophers; and in our own days, or those immediately preceding us, the most celebrated medical practitioners were well skilled in physics, particularly Chemistry; among whom we may mention Hoffmann, Stahl, and Boerhaave. It must be confessed, however, that the far greater number of medical men in the present day, are but little acquainted with these subjects; and indeed how can we expect that they should, when most of them are at once physicians, surgeons, accoucheurs, and druggists? The able and elegantly written work now before us, if universally diffused among the profession, as it deserves to be, will tend to make chemistry at least more generally attended to. Of such a work, so multifarious in its matter, and embracing so great a minutiae of detail, we find it impossible to give an exact analysis, and therefore we must confine ourselves to extracts, with the interspersions of a few occasional remarks.

Dr. Paris introduces his work in rather a quaint manner, by means of a dialogue betwixt a practitioner and the author, in which he canvasses the various modes of medical education. Without chemistry he thinks no man capable of practising the profession of physic, or of discharging his duty to himself or his patient. The living power is constantly opposed to chemical actions,

“And for that reason,” says our author, “it is essential to learn the nature of chemical action, before we can attempt to appreciate the extent of that force which modifies or resists it. But there are changes perpetually going on in the animal body, that are beyond the control of the living principle, and therefore the physiologist, who is not a chemist, will be utterly at a loss to comprehend them.”

By means of chemistry the manufacturer adulterates our drugs; but the practitioner who is a chemist, will readily detect the adulteration. But the general diffusion of knowledge, renders chemistry actually necessary to the practitioner.

“The higher classes of society,” says the author, “are crowding the lecture rooms of our public institutions, and the mechanic



and artizan are becoming enlightened through the medium of chemical societies, and the extensive circulation of cheap publications. What would be the surprise of our fathers, could their spirits revisit us, to see a sectarian meeting-house crowded to excess with mechanics, to hear a chemical lecture from the reading desk ! In such a state of intellectual advancement, what will become of the medical practitioner, unless he keeps pace with the general progress ?”

And mere reading will never make any man a chemist.

“ Without actual experiment,” says the author, “ it is quite impossible for a student to acquire any solid knowledge of the science. ‘ *Nihil est in intellectu, quod non fuerit in sensu*,’ was the motto which the celebrated Rodelle caused to be affixed in large characters in a conspicuous part of his laboratory, and I heartily concur in the justness of its application. With respect to the nature and extent of the apparatus which is required for the elucidation of philosophical principles, there is a very general misconception. By means of a common wooden tub, a quantity of tobacco pipes, and Florence flasks, and a few dozen differently sized corks with glasses and phials, I will undertake to illustrate all the leading facts in chemistry.”

In some introductory remarks, Dr. Paris informs us that he has endeavoured to exclude from his Medical Chemistry “ what ever has not a direct application to the study and practice of the profession.” Such a division of labour has contributed largely to the advancement of science ;

“ And I question,” says the author, “ whether to such a cause we may not principally attribute that rapid progress of philosophy, which has so eminently distinguished the last half century. Physiology is certainly much indebted to an arrangement of this kind for its present extended scale of improvement ; for, although the highest importance had been attached to the study of the human body from the earliest period, yet its functions were never made a distinct and separate object of inquiry, until the beginning of the last century. It is true, that the writings of the ancient physicians, and of the earlier among the moderns, abound in physiological speculations, but they are rarely brought in a connected or systematic form ; so that we are obliged to collect a knowledge of their tenets, more from a number of scattered fragments, dispersed through works on medicine and pathology, than from treatises expressly devoted to the subject.”

The cultivation of chemistry will render important services to the physiologist, pathologist, physician, toxicologist, and pharmacologist. The pathologist, there can be no doubt, will frequently draw important conclusions from the doctrines of chemistry.

"Although we must deeply regret," says our author, "that this department of medical knowledge, like that of physiology, should have suffered from too hasty generalization; but let no one attempt to tolerate his apathy, or to encourage his despair, by a reference to failures which have arisen, on the one hand, from a deficiency of knowledge, and on the other, from errors which are solely to be attributed to a perversion of it; let him rather seek encouragement in the contemplation of those useful improvements, which have been derived from the judicious application of chemical science, and which are daily augmenting the resources of the intelligent physician, and tending to diminish the aggregate of human suffering."

To the pharmacologist, chemistry is indispensable. It was an early conjecture, that substances which acted in a similar manner on the human body, must have a similar composition. The conjecture was a natural one; and though the results of chemical analysis were not always correspondent to it, they afforded no proof of its being false.

"Thus, in the earlier part of the seventeenth century, we find the chemists universally engaged in the analysis of the different vegetables used as remedies; many hundred plants were accordingly, for this purpose, submitted to examination, but not a single result was obtained that could, in any degree, sanction the pretensions of this science to that practical utility which theory had assigned to it; the most inert, and the most virulent vegetables, were found to afford the same products. That such a failure, however, was not attributable to the non-existence of those relations which they had endeavoured to trace, is at once rendered evident on comparing the successful results which have been obtained within the last few years, by pursuing the same principle of investigation by more perfect and less objectionable processes. Had even the experimentalists of the seventeenth century conducted their operations with all those essential precautions which it was impossible that the state of chemistry at that period could have suggested, the manner in which their analyses were performed, as such as to have precluded the chance of any useful result, for the plants subjected to examination were indiscriminately exposed to heat, and the products so obtained by their destruction, collected and rudely examined; now it is quite clear that these products did not pre-exist in the vegetables, but were formed by new combinations of its elements; and, since these elements are in all vegetables nearly the same, we cannot be surprised, that the experimentalists should have been incapable of tracing the least connection between them and the qualities of the substance from which they were so obtained. With equal reason and success might they have attempted to appreciate the style of a literary production, by ascertaining the letters of which its words were composed."

Dr. Paris has divided his work into three parts. In the first,

he treats of matter, attraction, and specific gravity, chemical affinity, crystallization, the atomic theory, caloric, light, and electricity: in the second, of chemical nomenclature, water, oxygen, hydrogen, carbon, azote, muriatic acid, iodine, nitric acid, ammonia, Prussic acid, sulphur, phosphorus, metals, and salts: in the third, of vegetable extract, essential oils, wax, vegetable acids, vegetable alkalies, other vegetable principles, and fermentation. On the subject of animal chemistry, he has not yet entered; but we have no doubt that at some future period it will give rise, in his hands, to an interesting volume. We may add, that at the end of the work there is an appendix of useful tables.

We cannot resist the temptation of extracting one or two of our author's beautiful illustrations of the properties of matter. Of its divisibility he thus observes:—

“The marble steps of the great churches in Italy are worn by the incessant crawling of abject devotees; nay, the hands and feet of bronze statues are, in the lapse of ages, wasted away by the ardent kisses of innumerable pilgrims that resort to those shrines. What an evanescent pellicle of the metal, says Mr. Leslie, must be abraded at each successive contact! Thus again, a single grain of the *sulphate of copper* will communicate a fine azure tint to five gallons of water; in which case the copper must be at least attenuated ten million times, and yet each drop of the liquid may contain as many coloured particles distinguishable by our unassisted vision; and, if the experiment be extended by still farther dilution, so that the metal shall cease to be an object of sense, it may nevertheless be recognised by chemical tests. In the same manner, to what an extraordinary degree of division are odorous bodies reducible? a single grain of musk has been known to perfume a large room for the space of twenty years; at the very lowest computation, the musk, in such a case, must have been subdivided into 320 quadrillions of particles, each of which was capable of affecting the olfactory organs. In like manner, a lump of *assafoetida* exposed to the open air, and filling the surrounding atmosphere with its effluvia, was found to have lost only a single grain in seven years.

In the same manner, striking illustrations may be adduced from the vegetable and animal kingdoms.

Porosity is a natural consequence of divisibility.

“Its existence in every species of matter which can be subjected to our senses, is sufficiently proved by the universal compressibility of bodies. There is no substance, however dense, that may not be made, either by pressure or reduction of temperature, to occupy less space; and, were it possible to bring the ultimate atoms into absolute contact, the globe itself might probably be compressed into an extremely narrow compass.

“Nor is the arrangement of the atoms of matter, which is thus

ed by its porosity, less important than its universality is. It is clear that, if the constituent particles had not been posed in relation to each other, as to have allowed free latimotion, natural bodies could never have undergone those s in form and composition, upon which their utility in the of creation entirely depends. It becomes a question even, r they could have been susceptible of change of temperature, we regard caloric as material in its nature, there would, in case, have been no space to have allowed its ingress; and, onsider it as a species of vibration, it is equally evident that ms, without free friction, could never have vibrated, for the vibration necessarily implies change of place."

ler the head of gravitation, we have some curious remarks ghts and measures, and on the symbols which denote and here Dr. Paris has taken occasion to ridicule the at- to substitute *unc. dr. scr.* for the ancient symbols, observ- it in the work which first proposed the alteration, *dr.* is han once printed by *mistake* instead of *gr.*

observe that the whole subject of specific gravity is placed ry clear light by means of diagrams; and we would re- nd it to our readers, as a subject of great importance, e from which physiology and pathology may yet derive advantages.

is consideration of contiguous attraction, we wish we had or the whole of his remarks on *capillary attraction*.

the physiologist," he observes, "capillary attraction is a enon of very great interest, for on its power depend chiefly ctions of the excretory vascular system in plants and ani- thus, says Professor Leslie, if the pores of the human skin o finer than the three thousandth part of an inch in diameter, ould yet be sufficient to support lymph to an altitude of hes, or 10 feet, or much higher indeed, than is required for ividual. The rejection of the perspirable matter from these d mouths must occasion a continued flow of the liquid from r and wider trunks of the capillary vessels, aided no doubt, onnected chain of alternate contractions and dilatations ex- through their muscular structure. The pores in the leaves and tall plants must be still finer, seldom perhaps exceed- ten-thousandth part of an inch. As fast as the humidity is d into the atmosphere, it is constantly supplied by the of sap from the roots. Dr. Hales attempted, by an ingeni- levised experiment, to demonstrate the power of the vegetat- niple, by measuring the *force* with which the sap ascended ramifying vessels of a growing plant; but had the same expe- been repeated, with a dead branch, the same result would allowed, provided the evaporation from its extreme surface an sufficiently copious."

Dr. Paris next treats of pulverization, trituration, lavigation, granulation, rasping, and grating; and then of sifting, elutriation, decantation, filtration, expression, coagulation, and despumation; all which he has illustrated with the appropriate figures of mortars, pestles, sieves, slabs, funnels, &c. &c. We give his remarks on coagulation, as a specimen of the rest.

"When," he says, "the process of despumation is effected by means of glutinous or albuminous matter, as the white of an egg, it is called *coagulation*; where the substance is not spirituous, as syrups for example, the albumen which is mixed with the fluid coagulates when it is boiled, and entangling the impurities of the fluid, rises with them to its surface in the form of gum; but spirituous liquors may be clarified with isinglass, without the assistance of heat, the alcohol coagulating it so as to form a scum, which, by descending slowly to the bottom of the vessel, carries along with it all the impurities. In this manner it will be readily perceived, that the net-work of isinglass merely acts the part of a filtre, but with this difference, that in this case the filtre passes through the liquor, instead of the liquor through the filtre."

The subject of chemical affinity, upon which our author next enters, is illustrated by a series of interesting and well-devised experiments, but on this subject we must furnish only a few short extracts.

In speaking of *solution*, he observes:—

"In ordinary cases, the distinction between *solution* and *suspension*, is so well marked, that the student cannot fail to recognize it, but in others it is not quite so unequivocal, and to those endowed with a tolerable share of knowledge, it has even appeared doubtful. It is sometimes difficult to pronounce decidedly upon the existence of perfect transparency, but the fact of *permanency* can never deceive us; for in the case of mere mechanical diffusion, although it may not always be impaired by rest, it will not resist the ordeal of the filtre. In explanation of this truth, we may adduce the beautiful golden-coloured liquor, which is produced by pouring a solution of sulphuretted hydrogen into one of arsenious acid, and which, at first sight, we should not hesitate to pronounce a perfect solution; but by rest or filtration, a yellow powder will be separated, and the liquid become colourless. So again, certain vegetable matters, when diffused in water, will, from the extreme fineness of their particles, offer so small an obstacle to the passage of light, as scarcely to affect the transparency of the medium in which they float, but, by rest or filtration, such a source of fallacy is easily detected. The medical student is earnestly advised to preserve these distinctions in his remembrance, as they will form the basis of some important precepts respecting the efficacy of certain remedies, and the expediency of some particular processes instituted for their preparation."

Passing over the various processes in which the common still,

the alembic, the retort, Woulfe's apparatus, &c. are employed, we come to the process of *crystallization*, by which the particles of a body are enabled to arrange themselves into determinate forms.

"It will follow," says Dr. Paris, "from what has been already stated, that in order to obtain well formed crystals from saline solutions, three essential circumstances are required, viz. *time*, *space*, and *repose*. By *time*, the superabundant fluid is wholly dissipated, so as to allow the particles of the salt to approach each other by insensible degrees, and without any sudden shock; in which case they unite according to their constant laws, and form a regular crystal; indeed it is a general rule, that the slower the formation of a crystal, the more perfect will be its form; the larger its size, and the harder and more transparent its texture; while on the contrary, too speedy an abstraction of the separating fluid, will force the particles to come together suddenly, and, as it were, by the first faces that offer; in which case the crystallization is irregular, and the figure of the crystal indeterminate; and, if the abstractions be altogether sudden, the body will ever form a concrete mass, with scarcely a vestige of crystalline appearance. *Space*, or a sufficient latitude for motion, is also a very necessary condition; for if nature be restrained in her operations, the products of her labour will exhibit marks of constraint. A *state of repose* in the fluid is absolutely necessary for obtaining regular forms; all symmetrical arrangement is opposed by agitation, and a crop of crystals obtained under such circumstances, would necessarily be confused and irregular.

"The whole art of crystallizing substances is founded upon these obvious truths, as will be fully illustrated in the sequel, although on many occasions, to ensure perfect success, a certain address is required in the manipulation, which has enabled particular manufacturers to produce articles very superior to ordinary specimens.

"In the act of separating from the water in which they were dissolved, the crystals of almost every salt carry with them a quantity of water, which is essential to the regularity of their forms, as well as to their transparency and density, and which cannot be expelled without reducing them to shapeless masses. It is termed their *water of crystallization*, and its proportion will be found to vary very essentially in the different salts; in some instances constituting more than half their weight, as in the case of sulphate of soda, carbonate of soda, nitrate of ammonia, &c., while in others it is extremely small; and yet, however it may differ in different salts, it always bears in the same salt in the same definite ratio to the solid saline matter. Thus, in crystallized bicarbonate of potass, (*Potassæ Carbonas* P. L.) to every three proportionals of salt, there is one of water; while in the carbonate of soda, (*sodæ subcarbonas* P. L.) to every two proportionals of salt there are eleven of water. This water appears to be in a state of combination with the salt, and not simply interposed between its laminae."

It is not in our power to follow the author through his accurate and beautiful account of crystallization ; therefore we close the subject with his concluding remarks.

" From the view," he observes, " which has been taken of the subject of CRYSTALLIZATION, it will appear that the structure of crystals bears no resemblance whatever to ORGANIZATION. Nothing can be more different than the increase or accretion of a crystal, and the growth of an organic being ; the one takes place by the mere juxtaposition of new particles, mechanically or chemically applied to its exterior surface ; whereas, the other increases in dimension, by appropriating different materials for its subsistence. At the same time it would be too much to assert that there is no formation in the animal body, which derives any assistance from the operation of those affinities which bestow impulse upon the particles of inanimate matter."

Elective affinity is next illustrated by a number of ingenious experiments, and chemical diagrams. Then we have a few remarks on *re-agents* or *tests*, valuable instruments in the hands of the chemist, by which, when applied to various solutions, he detects the presence of very minute proportions of particular ingredients. The proportions in which bodies combine, and the atomic theory, are the next subjects of consideration. In every case of energetic combination, the constituents unite in proportions which are always definite ; which is shown most satisfactorily in the combination of gaseous bodies with each other.

" The idea of definite proportions appears to have first struck the mind of Richter ; and Mr. Higgins, in his work on phlogiston, subsequently maintained the opinion, that bodies unite chemically, atom to atom. But the generalization of the doctrine was reserved for the genius of Mr. John Dalton, who deservedly enjoys the glory of having permanently established a theory, the development of which, to use the expression of an eminent philosopher, must be considered as the greatest step which chemistry has yet made as a science ; enabling us to establish principles of rigid accuracy, as the foundation of our reasoning, and to call in the assistance of mathematics to promote the progress of a science, which has hitherto eluded the aid of that unrivalled instrument of improvement. Already has the application of this theory shed a flood of lustre upon our science, not only by correcting former analyses, but by leading to the discovery of many unknown combinations, whose existence might otherwise have never been suspected."

The whole of this subject is very fully explained by Dr. Paris, but we have not room for a critical examination of it. To express the system of definite ratios, Dr. Wollaston has introduced the term *Chemical Equivalent*.

" Amongst the numerous practical uses," says the author, " to

which the doctrine of equivalents may be applied, that which enables the pharmacist to estimate the value and strength of certain preparations, is not the least important. By such means, for instance, he may easily ascertain the quantity of real hydrocyanic acid in any dilute solution; thus, since the equivalent number of hydrocyanic acid is exactly one-eighth of that of the peroxide of mercury, and as this acid combines in the proportion of two of the former to one of the latter, we have at once the relation of one to four in the formation of this compound. Hence it is evident, that if to a hundred grains of diluted hydrocyanic acid, we add in succession small quantities of the peroxide (*red precipitate*) until it ceases to be dissolved on agitation, the weight of the oxyde so dissolved being divided by four, will give a quotient representing the quantity of real hydrocyanic acid present. In like manner, we may estimate the quantity of real acetic acid present in any given sample of distilled vinegar; for, since carbonate of lime and the last mentioned acid have the same representative number, it is plain that the quantity of the former, which is dissolved by a hundred grains of the sample, will represent the per-centage of real acid."

To be intimately acquainted with all the known phenomena of heat, is a matter of great moment to the chemist; and Dr. Paris has investigated them with great care. In our selections on this subject, we cannot hope for much novelty, but we will try to be interesting.

Bodies, it is well known, are either good or bad conductors of caloric.

"To this difference in the conducting power of bodies, is to be attributed the different intensity with which different bodies, at the same temperature, affect us; a fact, which in itself, must be sufficient to render us wholly incapable of appreciating the amount of temperature by our sensations; thus, if we apply the hand in succession, to a number of bodies, such as wood, iron, marble, &c. they will appear cold in very different degrees; and as this sensation is occasioned by the passage of caloric out of the hand into the body which it touches, that body will feel the coldest which carries away the heat with the greater celerity, or which, in other words, is the best conductor. For the same reason, if these bodies have a temperature considerably above that of the hand, the best conductor will be the hottest to the touch; it is thus that the money in our pockets often feels hotter after standing before the fire, than the clothes which contain it. The heat of metals at the temperature of 120° Fahr. is scarcely supportable; water will scald at 150°, but air may be heated to 240° without being painful to our organs of sensation. Dr. Fordyce remained for some time, and without great inconvenience, in a room heated by stoves to 260°, but the lock of the door, his watch and keys lying on the table, could not be touched without burning his hand. It is for such a reason that we furnish metallic vessels with wooden handles, or interpose a stra-



tum of ivory or wood between the hot vessel and the metallic handle, by which means the transfer of heat is prevented.

"The power which air possesses of abstracting heat, is likewise very little; in the high northern latitudes a cold has been experienced without injury, in which mercury froze; but if in this state of the atmosphere metallic substances were touched, the part was immediately blistered. This fact of the very feeble conducting power of air has been turned to a very useful account in a variety of instances; hence the origin and utility of double doors and double windows, which infold sheets of air between them, and so preserve the apartments at one uniform temperature. Ice-houses, are thus, also, surrounded by a stratum or partition of air, in order to prevent the warm atmosphere from entering and melting the ice. The conducting powers of air is, however, materially increased by the presence of moisture; hence the cold which is experienced in a humid atmosphere, and the sensation which is so generally felt at the commencement of a thaw, when, notwithstanding the absolute elevation of the temperature, it appears to be colder than during the frost.

"From this view of the different conducting powers of different bodies, the fitness of different kinds of clothing for their respective purposes will become apparent. Animal and vegetable substances in general, are very bad conductors; thus, the hair and wool of animals, and the feathers of birds, are admirably adapted for protecting them from the cold, and they moreover inclose and retain air, which being a still worse conductor, enhances the effect. For the same purpose we wrap our bodies in woollen garments, and the air enclosed in their folds greatly enhances their utility; hence loose clothing is generally warmer than that which is fitted to the body. The tight great-coat may contribute to the ornament, but not to the comfort of our persons, and is in direct opposition to the effect which it was intended to produce."

We cannot enter here into the consideration of the theories of Black, Irvine, and Crawford; but we may observe, that the capacity of a body for heat

"Is merely a general expression, to denote the property which bodies have of containing, at the same temperature, and in equal weights or volumes, certain quantities of caloric.

"Upon what this property depends has not yet been discovered, nor is it, perhaps, a matter of material consequence, so long as the phenomena themselves are correctly observed and stated; it is clear that whenever the capacity of a body is augmented, there must be an absorption of caloric, and a diminution of temperature, and *vice versa*. It cannot then be doubted, but the absorption and latent state of caloric, which take place during the liquefaction and vaporization, are fully accounted for by the supposition of Dr. Irvine, by the change of capacity which accompanies these phenomena. That there should be such a change is *a priori* extremely probable;

As there is reason to believe, the capacities of bodies in situations of their minute particles, it is a probable when the form of a body is altered, its capacity also and as rare bodies have in general greater capacities which are more dense, there is some reason to presume the capacity of the fluid will be superior to that of the vapour or gas, to the capacity of the fluid. This conclusion is confirmed by experiment; for Dr. Irvine said, that the capacity of water is greater than that of ice by one-eighth, and Dr. Crawford states the capacity of aqueous vapour to that of water, as 1550 to 1000.

To the theory of Dr. Irvine it has been objected, that if the absorption of caloric be not considered as the cause of the change of form, from a solid to a liquid, or a liquid to a vapour, no adequate cause is pointed out. The reply to such an objection is obvious.—It is owing to the body being expanded to a certain degree, by which its particles are so far separated, that the force of cohesion by which they were held together is diminished or overcome, in consequence of which a new arrangement takes place, it passes into the fluid or aerial form, and in such a state, as more caloric is contained in it at a given temperature, a quantity must be absorbed in order to preserve that temperature. The general question would be unequivocally decided, were it possible to determine whether the change of form precedes the absorption or extrication of caloric, or whether the reverse be the case. But this cannot be directly ascertained, since the two appear to be simultaneous; it is however more probable, that the effect of the reduction of temperature is first to change the form, and that the extrication of caloric is the consequence of this. The late discoveries of Mr. Faraday add considerable support to such a supposition, for he has shewn that the form of a body may be reduced, by merely causing the particles of a body to approximate more closely. By mere pressure, he has reduced gases to the fluid form. This pressure, it is evident, can have only a mechanical effect on the aeriform matter; it must merely occasion a change of form, by bringing the particles into closer contact, and can have no effect in separating caloric, where it is chemically combined. Several other facts come in aid of the same conclusion; by the mechanical compression of air much heat is given out; thus, if air be suddenly compressed in the ball of an air-gun, the quantity of caloric liberated by the first stroke of the piston, is sufficient to set fire to a piece of tinder; a flash of light is said, also, to be perceptible at the moment of condensation. This fact has been applied to the construction of a portable instrument for lighting a candle. It consists of a common syringe, concealed in a walking stick. At the lower extremity the syringe is furnished with a cap, which receives the substance intended to be fired, and which is attached to the instrument by a male and female screw. The rapid depression of the piston condenses the air, and evolves sufficient heat to inflame the tinder. When, on the contrary, air

is suddenly rarified to many times its volume, its temperature sufficiently to sink a very sensible thermometer  $50^{\circ}$  of *Fahr.* its sensible heat instantly passing, in this case, into a latent form. The principle is well exemplified in a machine erected at one of the mines at Chemnitz, in Hungary. In this apparatus, the air within a large cylinder is forcibly compressed by a column of water several feet high. Therefore, whenever a stopcock, which is attached to the lower part of the cylinder, is opened, the compressed air rushes out with violence, and its expansion is so sudden and considerable that the moisture which was contained in the compressed air is immediately condensed, and falls in a shower of snow."

We have next the author's remarks on the different methods of measuring the temperature of bodies, and on the different artificial processes by which it may be increased or diminished.

Liquefaction and evaporation are the principal methods of producing an artificial cold. With these the physician or surgeon should be intimately acquainted. Evaporation

"Is perhaps the more universal and efficacious mode of reducing temperature, and is practised different ways, in various parts of the globe; thus, in India, where the apartments are separated from their courts by curtains instead of walls, slaves are employed in perpetually sprinkling these curtains with water, the evaporation of which, when constantly kept up, will reduce the temperature of the rooms ten or fifteen degrees. The principle of cooling by evaporation is well understood by the caravans, who cross the great desert of Arabia. These people have occasion for a large quantity of water, which they carry with them on camels, in bottles of earthen-ware, and which, in passing over the burning sands of that country, would become very disagreeably hot, were it not for the following expedient, which is universally adopted by them. When they lay in their stock of water, each bottle is enfolded in a linen cloth, and some of the company are appointed to keep these cloths constantly wet during the journey; by which means a perpetual evaporation is produced, and the contents of the bottles are preserved at a cool and refreshing temperature. In like manner, in the nights in Bengal, when the temperature is not below  $50^{\circ}$ , by the exposure of water in earthen pans upon moistened bamboos, thin cakes of ice are formed, which are heaped together and preserved under-ground, by being kept in contact with bad conductors of heat. At sea, wine and other liquors may be cooled, by enveloping the bottles in wet linen, and exposing them to a current of air in the sails. The *Alcarazas* of Spain, for cooling wine, act on the same principle of evaporation. These, which are very porous earthen vessels, are prepared for use by soaking them in water, for a considerable time, so as to saturate them with that fluid. Within these jars, vessels containing the wine are introduced, when the perpetual oozing and evaporation of the water cools the interior of

the vessel, and consequently reduces, in some measure, the temperature of the wine or other liquor placed in it.

"In our operations to produce cold by evaporation, the effect will be more striking and rapid, if we employ fluids that evaporate at a lower temperature than water; thus, æther may be made subservient, on many occasions, to the purposes of refrigeration, and this fluid, as well as alcohol, accordingly, affords the physician a valuable ingredient for the formation of cooling lotions. The frequent abuse of such applications, will afford a striking illustration of the necessity of chemical knowledge for the preparation and direction of remedies. I have known a lotion of this kind applied to the head, when the patient has immediately covered it with a flannel cap, and thus converted into a rubefacient, that which was intended to act as a refrigerant. As an instance, the converse of this, we have heard of the application of brandy to the feet, with the view of preventing the ill effects of previous cold, having occasioned, by its evaporation, such a diminution of temperature, as to have aggravated the evil it was intended to counteract. If we would prevent the mischief that usually accrues from wet clothes, we have only to prevent the evaporation that is thus occasioned. If a person in such a situation covers himself with a dry great-coat, he will have little occasion to fear the effects of his accident."

The methods of producing heat artificially are very numerous; but it is not necessary that we should enumerate them in this place; nor shall we enter upon the consideration of light and electricity. We must, however, extract a few remarks on the decomposition effected by electrical energy, and on the practical application of galvanic electricity.

"The fact," Dr. Paris observes, "of the transference of the elements of a combination to a considerable distance, through intervening substances, has been very ingeniously supposed capable of affording the means of eliminating calculi from the bladder. Could the functions of the part be protected against the influence of so powerful an agent, it is evident, that by a galvanic battery of sufficient intensity, a calculus composed of alkaline or earthy salts, might be transferred from the bladder by the simple introduction of a double sound, communicating on the one hand with the calculus, and on the other with two vessels filled with water, in which are plunged the opposite poles of a galvanic apparatus. This arrangement would transfer the acid constituents into the vessel connected with the *positive* end, and the bases into that of the *negative* end.

"Nor are the effects produced by a *simple* galvanic circle, less interesting to the medical practitioner, especially in their connexion with some curious and important facts in toxicology. It has been long known, that the poisonous effects of copper utensils might be prevented by a film of tin; but it was supposed that this protection ceased as soon as any portion of the surface was abraded. Proust, however, was the first to announce the fallacy of such an opinion,

but his explanation of the fact was purely chemical ; from the superior affinity of the tin for oxygen ; upon the same principle he stated, that no harm could arise from the alloy of tin with lead, since this latter metal cannot be dissolved by any acid, as long as an atom of tin exists. The true explanation of the fact, however, is to be derived from a knowledge of the electric relations of these metals, which the student will at once discover by referring to Table 1. (401.) where it will be seen, that tin is positive with respect to lead, and that copper is negative in relation to both. For the same reason, if acid matter be contained in a copper vessel, it will become poisonous if a silver spoon be used in stirring it, because this metal is negative with respect to copper, whereas, if a leaden or tin spoon be substituted, we shall derive a protecting influence from its action. It was by reasoning on this principle of electro-chemical agency, that Sir Humphrey Davy arrived at the important fact, that the copper of ships might be preserved from the corrosive action of the sea-water, by the juxta position of the discs of zinc, iron, or tin : in which case the muriatic acid, instead of acting on the negative copper, is transferred to the metal which is positive. The pursuit of this inquiry, has not only confirmed the justness of the views which suggested it, but it has furnished the toxicologist with a striking fact, in support of the assertion of Proust, for it has been found on trial, that when the copper is thus protected, marine insects attach themselves to its surface with impunity.

" Nor will the surgeon be excluded from his share of benefit from the discovery. Mr. Pepys has proposed to preserve steel instruments from rust by a simple application of the same principle ; it will be seen in Table 1, that zinc is positive with respect to iron ; if, therefore, a portion of this metal be inserted in a sheath, composed of some imperfect conductor, the introduction of the steel instrument will complete a simple galvanic circle of the first order, and the iron will be protected from oxidation.

" There is yet another application of galvanism to a purpose of medical utility, which deserves notice—the detection of minute quantities of corrosive sublimate. For this object, we have only to let fall a drop of the solution upon the surface of a piece of gold, as for instance, on a sovereign, and then to bring a piece of iron, and a key, in contact with both : a galvanic circle is immediately formed, and as the iron is positive, the acid will be transferred to it, and the quicksilver will be deposited on the gold."

We have now arrived at the second part of the work, in which the author treats of elementary bodies and their compounds. These should be arranged according to their electrical relations :

" But in a work strictly elementary, intended for the instruction of the mere student, the great object is to lead him from known to unknown propositions, by the least abrupt steps : and above all, to avoid, in our explanations of the simpler subjects, the anticipation of

more recondite phenomena. It is true that in many cases, such difficulty cannot be avoided, for the objects of science are connected in a circle, and from whatever point we start, some previous knowledge will be required. Thus, for instance, if we commence with the subject of attractions, its laws cannot be explained without a reference to the composition of substances, the names even of which may be supposed to be unknown. If, on the contrary, we commence with a history of such substances, their nature and studies cannot be understood without a knowledge of the attractions by which they are influenced; the same difficulty occurs in treating the subject of electricity. Without an acquaintance with the composition of several bodies, how can we exemplify the depositing powers of this wonderful influence; and without a knowledge of this agent, how are we able to explain the history of these substances, whose composition has been discovered through application? In many cases, however, these difficulties are but apparent, and are not to be placed in competition with the numerous advantages which attend such an arrangement."

Preparatory to the consideration of elementary bodies, we receive an explanation of chemical nomenclature; but we can only give the author's closing remarks on the subject.

In concluding the history," he observes, "of the composite nomenclature of chemistry, I may be allowed to express my strong objections with respect to the propriety of introducing it into medical science. Its principal value in science depends upon the assistance which it gives to the memory in distinguishing, and remembering multiplied combinations of nature and art; in pharmacy, such assistance is scarcely necessary; our medicines are few; and dull indeed must be that student who stands in need of an artificial memory. At the same time, it is a matter of great consequence, that the names of our remedies should be unchangeable, that the physician should be able to avail himself of the experience of his predecessors with facility, and that he should read their prescriptions without the aid of a glossary. This can only be accomplished, by adopting terms that are perfectly arbitrary, and not liable to fluctuate with the tide of chemical theory."

Passing over the whole of our author's admirable exposition of water, oxygen, hydrogen, and carbon, we shall dwell for some time upon the atmosphere, a subject not less interesting to the physiologist and physician than to the chemist.

The mechanical properties, and the composition of the air we breathe are well known; and these are nearly alike in all places, less when it is contaminated by adventitious ingredients. In ordinary cases, it is kept in a state of purity by the equipoise of certain processes, which are constantly carrying on in the great laboratory of nature, as its vital properties depend upon oxygen.

"There have been several substances proposed for ascertaining

with facility the quantity of oxygen in the air ; they have been called *eudiometrical* substances ; and the instruments in which they have been employed are named *eudiometers*. The value of such investigations must be obvious, when it is considered how important an influence the purity of the air we breathe, exerts upon the animal economy. Every medical practitioner ought to possess a sufficient degree of chemical knowledge to conduct such inquiries. What an accession of valuable information might we have possessed, had the Navy surgeon included in his reports, the state of the air in different parts of the ship, during the prevalence of various epidemics ?”

For the purpose of eudiometry, various processes have been recommended, and our author has enumerated them with ability, and by his drawings has made it an easy matter to understand them.

Even in the driest weather, water is always present in the atmosphere, and it has great influence in the human body.

“ And few subjects connected with meteorology are more interesting to the medical philosopher. How far the origin of various epidemics may be connected with it, future observations may probably discover. Increased humidity is ever attended with the sensation of cold, because the air is thus rendered a better conductor of caloric ; while, at the same time, it checks the perspiration, since the atmosphere, when in a state of saturation with water, is incapable of carrying off the insensible perspiration as it is formed. For the same reason, the watery exhalation from the lungs is diminished, and various morbid effects may be thus produced. The subject has not hitherto received a share of attention commensurate with its importance. The investigation might not only lead to an explanation of many phenomena which are at present unintelligible, but to the adaptation of an artificial atmosphere for the cure of disease. It moreover deserves notice, that a humid atmosphere becomes a more powerful solvent of vegetable and animal substances. Numerous examples might be adduced to shew, that volatile bodies are sooner converted into a gaseous state, under such circumstances. It is well known to lime-burners, that the lime-stone is burnt and reduced to quick-lime much sooner in moist than in dry weather ; and indeed, in the latter case, they not unfrequently place a pan of water in the ash-pit, the vapour of which materially assists in carrying off the carbonic acid. In like manner, camphor is found to volatilize with much greater celerity in damp situations.”

[We shall reserve a few important extracts and remarks for next Number, as we are unwilling to encroach on the space allotted for the Quarterly History.]

**QUARTERLY HISTORY**  
OF  
**IMPROVEMENTS AND DISCOVERIES,**  
BOTH AT HOME AND ABROAD,

IN

|                     |                     |                 |
|---------------------|---------------------|-----------------|
| ANATOMY,            | SURGERY,            | MATERIA MEDICA, |
| PHYSIOLOGY,         | PRACTICE OF PHYSIC, | PHARMACY,       |
| PATHOLOGY,          | MIDWIFERY,          | CHEMISTRY,      |
| MORBID DISSECTIONS, | FORENSIC MEDICINE,  | BOTANY, &c.     |

*forming a useful Library of Practical reference.*

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**I. ANATOMY.**

**J. F. MECKEL's *Manual of Anatomy*.**—A translation of this ingenious work has been made in France, with notes, by MM. Jourdan and Breschet. It is a more comprehensive work than any other which we know, containing both general, descriptive, and pathological anatomy. We cannot conceive, however, with what propriety M. Meckel denominates a book in four volumes, a hand book (*Handbuch der menschlichen Anatomie*). The French translators also call their three volumes a *Manuel*. The chief objection which we have to the doctrines of this work are against the imaginary generalities attempted to be established in the development of organs, somewhat on the principles which we have often alluded to of Geoffroi St. Hilaire, &c.

**FLORMAN's *Anatomical Manual*\***.—This is a respectable Swedish work, the first that has appeared since the time of Rosensstein, embracing a complete system of anatomy. We are happy to observe that this science is increasing in importance.

***Tensor Tarsi Muscle of the Eye*.**—We stated in our *Quart. Hist.* for July, 1824, that Professor Flajani, of Rome, had controverted the discovery of Dr. Horner, of the muscle of the eye, called by him the Tensor Tarsi. We then mentioned our belief, that Dr. Horner would reply to the charge of plagiarism: he has done so in the Philadelphia Journal for Nov. 1824, p. 98;

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\* Anatomisk Handbok för Läkare och Zoologer, A. H. Florman. 8vo. pp. 539.



and has shewn (we think) most clearly, that the descriptions and figures referred to by Flajani, either do not belong to this muscle, or are very inaccurate and imperfect. Rosenmuller's figure represents only a small fragment of the muscle. M. P. Guiseppe has given a very detailed description of the muscle under the name of the *Lachrymo-palpebralis*, in the *Giorn. Fisic. of Pavia*, for 1823.

**MORGAGNI's unpublished MSS.**—We are happy to announce, that twelve sets of MSS., chiefly in the hand-writing of the celebrated Morgagni have been discovered in the library of the Grand Duke of Parma; eleven of the sets are anatomical—the twelfth consists of consultations. Dr. Frank, in a letter to M. des Genett, gives hopes of their early publication.

**Dr. GODMAN on the Brachial Fasciæ.**—Our readers will recollect that Dr. Godman has endeavoured to bring the great multiplicity of fasciæ usually described, under one or two, which he says are extensive in their ramifications. We formerly gave his description of the *fasciæ superficialis*; we shall here give his account of the *fasciæ brachialis*, as a part of the same fascial extension, if we may use the expression.

"In the 'Anatomical Investigations,' recently published," says Dr. Godman, "I have described the *fascia superficialis*, as it extends over the trunk, head, and neck, anteriorly and posteriorly, and continues on to the arms. Subsequent examinations have confirmed these dissections, and have enabled me to show, most conclusively, that the *brachial fascia*, described as a distinct fascia, is a continuation of the great superficial fascia. The *fascia superficialis* forms sheaths for all the muscles of the trunk, neck, head, and arms. It forms, in a manner analogous, the sheaths of the muscles of the head and neck, and passing down into the chest with the great vessels, gives the important sheath called *pericardium* to the noblest part of our muscular structure, the heart.

"The brachial fascia is a simple continuation of the *superficialis*, as it may be traced from the chest under the great pectoral muscle, or from the back on to the deltoid muscle. The portion from the under surface of the pectoralis major joins the part covering the deltoid, at the inner edge of the last muscle, and when the attachments are broken through at this part, the fair and uninterrupted continuity of the superficial and brachial fascia is made evident. We then follow the fascia upwards, on the short head of the biceps, and on the outside of the arm, or on the long head of the triceps, up to the edge of the acromion and glenoid cavity, as heretofore described.

"This portion of fascia is external to the tendons of the muscles arising on the scapula, and inserted into the tubers at the head of the humerus. Each of these muscles, the supra and infra spinatus, teres minor, major, and subscapularis, have a sheath or double

vering of fascia, derived from the superficial fascia. If we split the external covering of these muscles, and cut the body of the muscle across so as to allow us to remove it from its place, leaving the inferior layer, we shall find this inferior portion running to the edge of the glenoid cavity of the scapula, and thence to the humerus, forming a layer of the capsular ligament. Thus each of these muscles forms a layer of the capsule, which, when raised, removes a part of the thickness of the capsule, and when we raise the lowest portions we open into the shoulder joint.

"It has been stated that these sheaths of the muscles are formed from the fascia superficialis, which surrounds the muscles above and below. When these layers are about to expand over the joint, so as to form the ligament, it is not possible to say how far the successive portions extend from the point where they first reach the joint. The capsular ligament of the shoulder joint is tolerably equal in its thickness, but where the tendons of the scapular muscles overlay the ligament, the thickness is very much increased by their attachments. The principle on which this joint is formed from the superficial (*brachial*) fascia is entirely analogous to that of the formation of the capsular ligament of the hip joint, by the fascia lata femoris.

"The fascia superficialis not only forms the sheath of the muscle, but sends the little septa through the muscle, enwrapping the bundles of fibres. These septa extend from the superior to the inferior portion of the sheath. This arrangement is very beautifully evident if we raise a part of the sheath of the muscle, and pull it upwards; then we shall see the exact manner in which these little partitions pass between the muscular bundles, and modify the direction of their actions."

**Dr. GODMAN'S Precautions for Dissecting.**—The means adopted in the Philadelphia Anatomical Rooms, to render wounds received in dissecting entirely harmless, are the following:—

"Whenever the fingers or hands are cut or punctured, the part is speedily washed with warm water and soap, and the wound sucked forcibly for a considerable time, until thoroughly freed from any matter introduced, or the suction is continued till blood flows no longer. A piece of fish glue (court) plaster is placed over the orifice, which is thus kept covered until healed. Such is the certainty with which this process averts any evil consequences, that the students who adopt it feel no uneasiness relative to cuts or punctures, which, in the old fashion of trusting to caustics, would give rise to the greatest anxiety. Where the cuts or punctures have been so slight as to escape observation at the time they were made, and the severe irritation and inflammation have commenced, all the unpleasant symptoms have been entirely removed by this operation.

"The advantages given us by this mode of treatment are very

evident on comparing the present with the past season. Last season several of my class suffered very severely; the attendant on the rooms, from a slight scratch on his thumb, nearly lost his life, and was only saved by the suppuration of his axillary glands. In my own person I three times suffered dreadfully; in one instance the whole arm swelled with immense irritation, accompanied by the most sickening sense of prostration, and several weeks elapsed before I could use my hand. In every instance the injury was slight, and had been promptly treated with caustic potash, or butter of antimony, both of which, I believe, without destroying the poison, added to the irritation.

"This season we have had fully as many cuts, punctures, and scratches, from dissecting instruments, without the least inconvenience. One member of my class had slightly punctured his finger under the nail, and had applied the caustic alkali; his finger and hand were becoming stiffened, and the peculiar irritation had begun to affect his forearm. I pared the nail as closely to the wounded surface as possible, and directed him to suck it forcibly, which being done, a piece of court plaster was laid over the end of the finger, and a poultice kept on during the night. The next day the tension and irritation had disappeared.

"That such symptoms are not produced by the caustic I know by full experiment; the caustic causes much irritation at the moment of its application to surfaces injured in any way, except with anatomical instruments, but it is not followed by any of the circumstances produced by the terrible poison of the human body.

"During this Winter I have myself been wounded very frequently with a variety of instruments, even having my hand lacerated by a long used and thickly coated saw. I have been punctured slightly and deeply in the sides and extremities of the fingers while dissecting bodies in various stages of putrefaction, without being followed by the slightest injury, and which, without the treatment mentioned, must have produced most serious, if not fatal results.

"There is one instrument that I hope to see banished from the dissecting room, and from the cases of dissecting instruments. This is the hook, which, whether single or double, is one of the most detestable poisoners that can be imagined. Being generally made with very sharp points, which are more or less ragged on their sides, it is hardly possible to use them, especially at night, without receiving punctures, and these wounds are so slight as not to be perceived until the mischief is done. They may be entirely superseded by the forceps and fingers, or if a hook be considered essential for holding up nerves or vessels, let it be a blunt one. The double hook is still more dangerous than the single one, and is totally unnecessary, as it may be superseded by using common straight pins."

## II. PHYSIOLOGY.

**M. MAGENDIE on the Insensibility of the Nerves of the senses.**—This celebrated physiologist has ascertained by several experiments, that the peculiar nerves of the senses are less sensible than is usually supposed. In operating for cataract on a woman, he accidentally touched the retina with the instrument, but she manifested no sensation. He afterwards touched the retina of both eyes, so as to produce the same result, in the most satisfactory manner.

**MR. WILTANK on the Action of the Heart.**—From several experiments made upon animals to ascertain some disputed points relative to the part, Mr. Wiltbank concludes—

“That contrary to the theory of Le Gallois, the action of the heart, and so much of the circulation of the blood as depends upon the action of the heart, are completely independent of the whole source of nervous power; and having gone thus far, we can, in my opinion, have no difficulty in assigning to the heart the proper cause of its action. This is, without the least shadow of doubt in my mind, and I think in every ingenuous mind, the *vis insita* of Haller. It is by this theory alone, that we are enabled to explain the cause of the action and propulsive power of the heart, after the destruction of the brain and medulla spinalis; and even after the removal of the heart from the body. In vain may the adversaries of the *vis insita* attempt to explain these facts, or conform them to any other theory. The whole of the difficulties raised against the theory of Haller since his time, have been reduced by Le Gallois to four; these are, 1st, Why does the heart receive nerves? 2d, Why is it influenced by the passions? 3d, Why is it not subjected to the will? 4th, Why does the circulation continue in acephalous and decapitated animals?”

“Let us first observe Le Gallois’ explanations of these objections. ‘The heart,’ says he, ‘receives nerves, and is eminently subject to the passions, because it is animated by the whole of the spinal marrow. It does not obey the will, because none of the organs which are under the influence of the whole nervous power are subject to it. In fine, the circulation continues in acephalous and decapitated animals, because the motions of the heart do not depend on the brain, or only depend on it in a secondary way.’

“To say nothing of the confusion left on the subject by this explanation, let me ask the explanation of one fact, the truth of which Le Gallois himself admits. Why have children been born alive without either brain or spinal marrow? While this question, as heretofore, remains unanswered, there is a death blow to the theory of Le Gallois, which it never can survive. By the late views and discoveries of Messrs. Magendie and Bell, we are enabled, in a very

satisfactory manner, to explain these hitherto inexplicable difficulties. By these gentlemen, the nerves are divided into those of sensation, and those of volition; and these are distinct from each other. Now the nerves of the heart are evidently nerves of sensation, and not of volition; hence their use. These nerves also serve to establish a connexion between the heart (which would otherwise be an insulated organ,) and every part of the system; thus we can account for the sympathies that exist best between the heart and the other organs of the body, the influence of the passions upon it, &c. The third and fourth, so far from objections, are more explicable on the vis insita, than on any other theory whatever. It, indeed, appears astonishing that such frivolous objections should be proposed, for the third is immediately removed when we consider that the heart owes its action to an innate principle, and the fourth, that it is completely independent of the whole source of nervous power. When, however, we oppose to these difficulties such, of a contrary nature, as has been done in the course of this essay, the objection to the vis insita all vanish, and it becomes firmly re-established, defiance of all the efforts of its adversaries."

M. PELLETAN on the *Galvanic Phenomena of Acupuncture*.—From the numerous trials lately made in France of acupuncture, the phenomena attending it have been much more minutely studied than in this country. M. Pelletan thinks he can observe, that galvanic indications are perceptibly given when a needle is plunged into a part of the body affected with pain. The quantity which was ascertained by the galvanometer of Becquerel is extremely small, being not the hundredth part of what is obtained from a single plate of the common voltaic pile. M. Pouillet asserts, that no galvanic action follows the use of a gold or platinum needle. This, however, is of little consequence, so far as acupuncture is practised as a remedy for disease, as its efficacy does not appear to depend in any degree on the galvanic action.

*The Olfactory Nerves*.—In pursuance of the opinion deduced from his experiments, M. Magendie has discovered a case to support the assertion that the olfactory nerves have nothing to do with the sense of smell. It was that of a man who possessed the sense of smell, though the inferior portion of the brain and the olfactory nerves were much impaired.

M. WESTRUMB'S *Experiments on the Direct Passage of Substances into the Blood*.—Although the frequently repeated experiments of Flandrin, Magendie, Maxen, Gmelin, and Tie mann, leave little doubt as to the direct passage of many substances into the venous system, it gives us additional pleasure to notice a farther confirmation of them by a skilful physiologist. M. Westrumb, of Hamelin. His experiments are the fo

ng :—The sulphuretted hydrocyanate of potass, indigo, rhubarb, oil of turpentine, were injected into the stomach of dogs and sheep; and after various intervals of time, the animals were killed and carefully examined. When a mixture of indigo and oil of turpentine had been used, and the animal was killed five hours after the beginning of the experiment, the two substances were fairly manifested to the sight and smell in the whole tract of the intestines, as well as in the blood of the vena porta in the substances of the lungs, liver, and kidneys, and in the urine; but not a vestige could be recognised in the glands of the mesentery, or in the chyle. The oil of turpentine, and the hydrocyanate of potass were given to a sheep in repeated doses during four days, and it was killed half an hour after the last dose. Neither of these easily detected substances could be found in the lymphatic vessels or glands of the mesentery, or the thoracic duct; but both of them were very obvious in the liver, kidneys, spleen, and blood of the vena porta. Similar results were obtained with the decoction of rhubarb, and the sulphuretted hydrocyanate of potass. Tying the thoracic duct near its termination did not alter the phenomena. The researches of Westrumb likewise confirm those of former experimenters, as to the extreme rapidity of the venous absorption. He detected rhubarb in his own urine five minutes after swallowing an ounce of its infusion; and after the same period in rabbits, but not earlier. Half a grain of the hydrocyanate of potass given to a little dog, became sensible in the urine at the end of two minutes.

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### III. PATHOLOGY.

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**M. NAUCHE on the Characteristics of Expectorated Matter.**—M. Guibert has given the following as the methods adopted by M. Nauche to distinguish the sputum of inflammation from that of merely increased mucous secretion.

“In the natural state, or where there is merely an increase of irritation, the matters secreted by the different mucous membranes, have constantly about them a no inconsiderable degree of acidity. But when these membranes are *inflamed*, their vital properties undergo some change; and their excretions become alkaline.

“It is easy to detect these two states, by means of a piece of paper coloured blue by turnsol. When the matter expectorated is acid, the paper becomes red; on the contrary, it takes a darker blue, or from being red it becomes again blue, when the matter excreted is alkaline.

"M. Nauche has examined expectorated matters, in so far as they are of an acid or alkaline nature, in diseases of the respiratory organs. In consequence of this examination, he has thought himself authorized to divide them into matters produced by an *irritation*, an augmented secretion from the mucous pellicles which line the membranes of the air passages, and into matters or sputa, which are the result of inflammation.

"He has observed that the white, frothy, and often very abundant mucous matters, which persons in a state of agony pass by the mouth, where the air passages have been previously healthy, are constantly of an acid nature. The same thing may be said of the white frothy sputa of pleurisy, whether acute or chronic, and in the commencement of pneumonia, when the sputa are white or even yellow. During the course of the latter disease the acidity is lost, but reappears towards its decline. The sputa are also acid in emphysema of the lungs, and in scrofulous pulmonary consumption, when the tubercles are in what is called, the state of *crudity*. In all these states it is evident, that the mucous membranes are *not* inflamed.

"M. Nauche has also found the sputa acid in some advanced consumptions; and he believes that this depends upon the expectorated matters being the produce of an increased secretion of the mucous membrane, which lines the excavations formed by the melting of the tubercles.

"The expectorated matters, on the contrary, are constantly alkaline in inflammation of the mucous membrane of the bronchia, and in all those cases which go under the name of *acute or chronic catarrhs*, or *mucous consumptions*. These matters are really, though not so considered, a kind of pus, analogous to the purulent serosity of inflamed serous membranes.

"Expectorated matter also becomes alkaline in peripneumony when the inflammation of the pulmonary texture is communicated to that of the mucous membrane of the bronchia, and when this secretion is the produce of the inflammation of these two textures.

"The sputa are also alkaline in the second or third stage of pulmonary phthisis, when the tubercles are melting. In this case, the internal membrane of the lungs is generally much altered.

"It often happens, particularly in phthisical patients, that the two kinds of sputa are expectorated at the same time. Those which are the result of *increased excitement*, come up most easily, and they are white, frothy, and acid; but the others, which are expectorated with difficulty, are yellow, thick, and alkaline. When in this affection, the patient no longer expectorates any thing but the first kind of sputum, his life is often in the greatest danger."

DR. HOSACK'S *Pathology of Croup*.—The following account of the progress of this destructive disease is both very accurate

and also leads to the best practical principles—a circumstance which does not by any means follow many logical distinctions. “I have been led,” says Dr. Hosack, “at the bedside to distinguish three distinct stages in the croup: the first may be denominated the *forming* stage in this disease; in this the affection is local; the irritation has not yet extended to the whole system; the child even sits laughing and playing upon the lap of its mother, manifesting a very unusual but morbid degree of exhilaration; its skin is cool and moist, its pulse not perceptibly accelerated, but its hoarse, hollow sounding, and frequently returning cough, its wheezing inspiration, its restlessness, and especially its cries after a fit of coughing, all denote to the physician and parent acquainted with the disease, the consequences that will soon ensue if active means be not employed to prevent the second or *febrile* stage.

“In this stage the whole system partakes of the irritation; the pulse is frequent, the skin hot and dry, the respiration hurried, the tongue covered with the white fur, indicative of inflammation; the lips and cheeks remarkably florid, the cough frequent, but attended with a more acute sound than that of the first stage; every inspiration too is attended with more uniform wheezing than that which appears in the first, when, occasionally, an interval occurs in which the child breathes as if in health. But in this second stage no such interval is perceived; the trachea, bronchia, and lungs, become so overcharged by the circulating fluids, that the child has not even a momentary relief from its oppression; and in a short time if left to itself, especially if the patient be plethoric, the countenance exhibits purple, livid color, not unlike that of apoplexy, and is even attended with a degree of stupor, or propensity to sleep. This loaded state of the lungs, and interruption to the free return of blood from the head I have frequently witnessed in this stage of croup.

“If the patient be now neglected, or the evacuations be sparing and insufficient, an effusion from the exhalant vessels opening into the windpipe, bronchia, and surface of the lungs, inevitably takes place. In the two former the effused matter assumes a membranous appearance, probably owing to the forcible passing and re-passing of the air through those preternaturally constricted tubes; but in the lungs themselves it appears in the form of a viscid fluid, partly resembling both phlegm and pus. When this effusion has actually taken place, the febrile symptoms sensibly abate, and sometimes disappear altogether; the child is also apparently free from pain, but it suffers violent paroxysms of cough and difficult breathing, attended with an irregular and spasmodic respiration, as in asthma or dropsy of the chest, and with similar intervals of ease. These paroxysms in young children continue but a few hours before dissolution. But in children arrived at eight or ten years of age, they frequently continue several days. A daughter of Gen. Morton, whom I saw in consultation, continued to struggle with these painful paroxysms at least four or five days after the febrile stage had terminated, and the effusion of matter, constituting the membrane,



was supposed to have taken place. In some cases the impediment to inspiration; and the distress attending the paroxysms are so great, that the only position in which the patient can respire is with the head thrown back. In this situation the trachea is extended and thereby its capacity increased, and adapted to the membrane which it incloses. In some instances, general convulsions ensue before death, which speedily terminate the sufferings of the patient. This stage, in which the membranous effusion so frequently takes place, I denominate the *membranous* or *purulent* stage; from the advanced state of the disease recovery is so rare, that it is not to be expected; it might almost be denominated the fatal stage of *croup*. These distinctions it is, in my opinion, important for the practitioner to keep in view, as they lead to important conclusions in practice.

**Dr. JAMES JOHNSON on Goitre and Cretinism.**—From the following sketch we perceive, that Dr. Johnson has not been a listless traveller in his late Continental excursion.

“ Dr. Drug, who practised some time at Matlock baths, Derbyshire, conceives that he discovered the cause of goitrous affections, namely, sour oat-cake, aided by other innutritious diet, as inferior potatoes, &c. We apprehend that it is a very limited view of goitre and cretinism. We observe the former more abundant in some than in other parts of Switzerland, though the diet be the same; for instance, in the valley of the Rhone we hardly see any thing else than cretins and goitres, while in the valley of Chamouny, separated only by the Col de Balme from the other valley, we see very few of other diseases. This contrast must arise, therefore, from something in the air, or in the water, or both; for the food and mode of living are the same. Moreover, we trace bronchocele along the whole course of the Rhine, from Schaffhausen to Cologne; its frequency gradually and progressively decreases as we descend that magnificent stream. What can this be owing to? For our own parts, after viewing with no inattentive eye, the moral and physical conditions of those inhabitants of the Alpine regions where cretinism and bronchocele abound, we have come to the conclusion, that one of the main causes of bronchocele especially is to be found in the water, however much this cause may have been scouted by some medical and scientific travellers. We do not mean to say that it is the snow water which has any thing to do with the complaint. But who can tell the thousand matters with which the Alpine waters are impregnated. Every stream, great and small, that takes its origin from the glaciers and other elevated crusts of ice or snow, becomes, in a short time, perfectly white with particles which it wears off from the rocks and mineral substances in its noisy and precipitous route to the lakes below. Hence, a bottle of water taken from any of these streams, lets fall, on standing, a prodigious deposit of earthy and saline, or mineral substances. When we consider the infinite variety of minerals constituting the beds and banks of these Alpine streams, and see the quantity of attrit

which they carry with them, and which are swallowed by the inhabitants, we can have very little doubt that such ingredients have no trifling influence on the physical organization of man. This supposition is strengthened by the fact which we have just mentioned, that bronchocele gradually and progressively decreases as we descend the Rhine—a river that rises in, and is chiefly supplied by, Alpine waters. It is hardly necessary to observe, that as the river increases its distances from the Alps, it lets fall the waters with which it was impregnated, as well as becomes mixed with auxiliary streams from countries not Alpine. This change is remarkable also in the Rhone. The upper Rhone, where it falls into the lake of Geneva, is turbid even to whiteness; but its waters, while nearly quiescent in the lake, become clear, and pass through the city of Geneva like translucent streams of bluish crystal. Among those who inhabit the banks and drink the waters of the upper Rhone, (namely in the Valais) there are twenty cretins and goitres for one that can be seen on the lower or filtered Rhone, in its progress to the Mediterranean. Although we do not contend that *all* this difference is owing to the change of the waters; yet, taken in connection with the Rhine, we think it forms a strong ground of presumption of the goitrefactive (if we may use such expression) influence of Alpine waters. That the cause of bronchocele cannot be traced to sour bread, or indeed to any particular article of diet, (the waters excepted) at least in Switzerland, is proved by the fact, that English children (who live as well as people in England) cannot be kept long at Geneva, or in any other part of Switzerland, without having enlargements of the thyroid gland. This fact is well known to those English families who sojourn in that romantic country. But it may be asked, can the waters in Derbyshire, or other goitrous countries in England, be the cause of bronchocele? We may answer, that it is much more probable that the cause of the disease should reside in the earth than in the air; and if in the former, surely the water which we drink is the most likely vehicle for its conveyance into the constitution. There is a mineral or saline substance in nature which is capable of removing the swelling of a thyroid gland—for instance, iodine; and why should there not be another saline or mineral substance which is capable of producing the said swelling? The same valley which issues forth the miasma which causes ague, gives birth to the tree that furnishes the quinine which cures the disease.

“When on this subject we may remark, that from an attentive survey of the Alpine valleys, it appeared to us that cretinism and bronchocele were only two prominent features of one great physical and intellectual deterioration which prevades the inhabitants of scenes the most romantic, sublime, and beautiful, that human eye has ever yet beheld. It is not the swelled neck, the enormous head, and the vacuity of mind alone, that arrest our attention in traversing the Alpine regions; the whole corporeal fabric, with

all its intellectual prerogatives, is stunted, deformed, and, as it were, absorbed ! Well might Goldsmith say—

“ Man is the only plant that dwindles here.”

“ Every feature and phenomenon of nature around is wild, grand, and impressive, while he who is master of the whole, and the alleged image of his Creator, is an abomination to the sight.

*Arrangement of the Diseases of the Bones.* By DR. CUMIN\*.—

“ Notwithstanding all that has been written on the diseases of bones, the opinions of medical men regarding these affections are as yet by no means clear and determined ; and in proof of this assertion, I appeal with confidence to their conversation and writings. Nothing is more common than to hear a bone declared to be carious, when it is necrosed ; and the same confusion and inaccuracy in the employment of these and of other terms are to be met with in the writings of some of our latest and most respectable surgical authors. Mr. Crampton, the surgeon-general of Ireland, whose abilities and information are highly and justly appreciated, says, ‘ In caries the bone is deprived of life.’ Mr. Liston wishes to limit the terms caries to such ulcers in ‘ bones as resist the natural efforts of the constitution towards their cure, and require the active interference of art.’ Mr. Lizars, in the remarks which he has appended to his excellent anatomical *fasciculi*, terms *spina ventosa* ‘ an aggravated species of exostosis, where caries follows with suppuration within the bone ; and he subsequently speaks of mollities ossium, and osteo-sarcoma as identical. Mr. Wilson, the late distinguished teacher of anatomy, after having described what he understands by *spina ventosa*, adds, ‘ the term osteo-sarcoma has lately been used to designate this formidable disease.’ Even Sir A. Cooper, of whose merits it is unnecessary for me to speak, appears to have confounded osteo-sarcoma with exostosis ; for he has described and figured under the name of *fungous exostosis*, cases of diseases which appear to be truly of an osteo-sarcomatous character ; while, on the other hand, he has associated this *fungous exostosis* with an affection which has no resemblance to osteo-sarcoma, and is truly an osseous tumour. The illustrious Scarpa himself has not always distinguished caries from necrosis of a bone. Caruncula, cariosum os à sano unde quaque sejungit atque expellit.

In the following paper, I propose, in the *first* place, to exhibit a synoptical table of the diseases of bones ; and, in the *second*, to give brief descriptions of them, with a more extended account of that affection which appears to be least understood, and which has therefore occupied the largest share of my attention. I mean osteo-sarcoma.

*Table of the Diseases of Bones.*—1. *Ostitis*. Inflammation of bone.—  
2. *Hyperostitis*. Morbidly increased deposition of osseous matter,

\* Edinb. Med. and Surg. Journ.

without the formation of any circumscribed long tumour.—3. *Osteo-apostema*. Suppuration within the osseous substance.—4. *Caries*. Ulcer of a bone.—Species 1st. *C. Exedens*. Destructive ulcer of a bone.—Species 2. *C. Ossificans*. Ulcer of a bone, with deposition of new osseous substance, having a morbid and imperfect organization.—5. *Osteo-anabrosis*. Simple absorption or erosion of a bone.—6. *Osteo-necrosis*. Death of a bone.—Species 1st. *Osteon-simplex*. Simple loss of vitality.—Species 2d. *Osteon. Regenerans*. Loss of vitality, with subsequent reparative process.—7. *Exostosis*. Distinct circumscribed tumour arising from bone, and consisting partly or wholly of osseous substance.—Species 1st. *Exost. Cylindrica*. Tumour on bony crust, enclosing osseous partitions, more or less perfect.—Species 2d. *Exost. Petrosa vel Laminata*. Tumour formed of craggy portions, or laminated excrescences of bone; intermixed with cartilage.—Species 3d. *Exost. Eburnea*. Osseous tumour having the solidity and whiteness of Ivory.—8. *Osteo-sarcoma*. Sarcomatous tumour, originating from the lining membrane of the longitudinal canals, or the cancelli of bone.—9. *Osteo-malacia*. Softening of the bones.—1st. *Osteom. Infantum*. The proportion of albuminous substance much increased. Cortex of the bone thickened, texture reticulated.—Species 2d. *Osteom. Adultorum*. Both the cartilage and albuminous substance much diminished. Cortex greatly attenuated.

“A tenth genus, under the designation *Fragilitas*, may perhaps by some be considered necessary, in order to complete the view of the diseases of the bones; but the extreme facility with which bones are sometimes fractured, is symptomatic of several different morbid states, and therefore it cannot with propriety be admitted to constitute a separate genus of disease.—1st. Fragility of the bones is occasioned by the diminished proportion of albumen and superabundance of oil in the bones of the aged, as well as by the thinning of the osseous walls, which has been remarked to take place at that period of life.—2d. It occurs very frequently in *osteo-malacia*, both of the infant and adult, as a consequence of that disease.—3d. Fragility takes place in *osteo-sarcoma*, when the absorption of the bone has proceeded through a great part of its diameter. Several authors have asserted, that fragility of the bones occurs in connexion with cancer; but on this point my own experience enables me to say nothing; nor have I succeeded in obtaining any satisfactory information with regard to it from surgical writers. Petit relates the case of a woman who had long suffered under cancer of the mammae, and in whom tumours formed in the bones of the thigh, arm, and clavicle, with excruciating pain, which continued, without intermission, until fracture at the affected points took place, in consequence of slight exertion. The case appears to me to possess all the characters of osteo-sarcoma.

“Simple *nudation*, or exposure of bone, cannot in strict propriety be considered as one of its diseases; but it is of great consequence to distinguish this state of the osseous texture, from *osteo-*

*necrosis* and *caries*, with which it has been too often confounded: Healthy bone, when its periosteum has been forcibly separated, presents a pinky colour, with numerous minute orifices of ruptured vessels: if, on the other hand, the removal of the periosteum has been caused by suppuration, the colour of the bone, if still healthy, is white; its texture unchanged from the healthy state, and no line of incipient separation can be detected around the circumference of the exposed portion. Other diagnostic symptoms of *nudation* might be enumerated; but while those now stated remain, we cannot be assured that the denuded bone is either necrosed or ulcerated; nor should we be warranted in employing any other treatment than that simple mode which exposed bone requires."

Dr. JAMES JOHNSON'S *Case of a Tympanitic State of the Pericardium*:—

"Mr. Scott, of the Haymarket, aged about 47, had, for three or four years, been declining in health, but had not been under regular medical superintendence till a few weeks before his decease. His regular history of the complaint, therefore, could be obtained. He stated, however, that his appetite and strength had gradually declined, but his chief complaint was a fluttering, a palpitation, and a sense of anxiety about the region of the heart, with disturbed sleep and frightful dreams. When seen a few weeks before death, his countenance was like that of a person in a state of anemia, except that there was also a chlorotic tinge in the skin. The pulse was very feeble, quick, and irregular; there was a tendency to cedema about the ankles; the appetite was almost entirely gone, and the patient felt approaches to syncope, on using any exertion or ascending stairs. His mind was desponding, and temper irritable. The motions from his bowels were perfectly healthy. The chest in every part sounded remarkably well. In the region of the heart, percussion elicited as clear a sound as in any other part of the chest. The impulse of the heart against the ribs was very feeble, and scarcely audible. It was also irregular, in correspondence with the state of the pulse. The patient was under the care of Mr. Fincham, of Spring-gardens, and was visited successively by Dr. Hooper, Dr. Macmichael, and Dr. Johnson.

"When the above mentioned symptoms and phenomena were ascertained by the last mentioned physician (not in consultation with the others), he gave it as his opinion to Mr. Fincham, that the patient laboured under disease of the heart; and that the nature of the lesion was probably a weakening and degeneration of the muscular structure. In a few days after this examination the patient suddenly died, and the body was examined by Dr. Johnson, Mr. Fincham, and Mr. Henry Johnson.

*Dissection, 13th February, 1825.*—"The body extenuated, but still there was some peculiarly yellow fat on the chest and abdomen. The muscles, though wasted, were of a vivid red colour. All the organs in the abdomen were sound. On opening the chest the lungs.

presented a beautiful blue appearance, sparingly mottled with white; they were very sound. Between the two lungs there presented itself a pellucid membrane distended with air. This was found to be the pericardium, reduced to a most extraordinary degree of tenuity, and distended with a very considerable quantity of air. The heart was small (not half filling the pericardium), and extremely degenerated in substance, a great part of its muscular structure being converted into a kind of fat. The whole was so lacerable as scarcely to bear handling. The parietes of the left ventricles were not more than a quarter of an inch in thickness—the internal surfaces of the cavities were pale, wasted, and not containing a single drop of blood. Neither was any blood to be seen in the large vessels issuing from the heart. There was nothing particular in the valvular structure of the organ.

“ Dr. Johnson has met with several cases where the heart was in this degenerated condition, but never before observed such a distension of the pericardium by air. It is quite evident from the size of the pericardium and its extensive tenuity, that this collection of air must have been of some standing. This phenomenon accounts for the region of the heart being as sonorous as any other part of the chest, which is not usually the case\*.

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#### IV. MORBID DISSECTIONS.

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##### *Dr. GODMAN's Case of Hernia.*

“ The subject of this investigation was the body of a well formed and muscular man, who had committed suicide a day or two previously. A tumour somewhat pear-shaped, and about the size of the doubled fist at the lower part, occupied the right side of the scrotum, extending up to the external abdominal ring, growing smaller in its ascent. The testicle was to be distinguished at the under and back part of the tumour; the sensation imparted by touching the tumour, resembled that produced by pressing on slightly elastic dough. From the uniformity with which this sensation was produced at all parts of the tumour, the conclusion was drawn, that this was a case of pure omental hernia, or epiplocele.

“ The integuments being removed from over the whole of the tumour, the fascia superficialis came into view, strong and well defined; covering the whole of the tumour in the scrotum, and being strongest immediately over the situation of the ring.

“ When the fascia superficialis was raised from the whole tumour, the cremaster muscle presented, though its fibres were not distinct, except at the upper part, immediately below the ring. The cremaster was attached with considerable force to the whole of the anterior part of the true hernial sac, or peritoneal envelope; so that it would have been impossible to cut through the cremaster

muscle without at the same time laying open the sac, if this tumour had been operated on during the life of the patient.

"The sac being opened from about an inch below the ring to the extremity of the scrotum, the contents of the tumour were exhibited, and proved to be a great mass of the omentum, folded on itself in a singular and beautiful manner.

"Towards the lower part, the omentum was much altered in structure, being thickened, loaded with fat, and studded with knobs of various sizes, from that of a hazel-nut to less than a pea. Nearer to the neck of the sac the structure was more natural, though denser and firmer than the ordinary character of this membrane.

"The external abdominal ring was very greatly enlarged, so that all traces of its usual appearance were obliterated. The omentum, as it passed through the ring, was more than an inch in diameter, and several adhesions existed between the omentum and the surface of the sac below. The internal edge of the external ring, seen when the muscle was detached in the middle, and thrown downwards on the thigh, appeared as if rolled on itself.

"Nothing peculiar was observed in the cremaster muscle within the external ring. When this muscle was removed, the fascia interna, (or fascia transversalis, as it has been incorrectly called, through which the internal abdominal ring is formed, came into view, being strongly marked, and most so immediately at the ring, though without any circumscribed thickening. It was now seen that the internal ring was almost directly behind the external one, a necessary consequence of the continual dragging of the tumour.

"When the fascia interna was split through at the internal ring the neck of the sac became fairly visible, and though covered only by the peritoneum, this membrane was so altered immediately where it had been pressed on by the ring, as to appear firm and rounded, bearing considerable resemblance to an annular ligament. Above this circular portion, the peritoneum was removed, and then a part of the arc of the colon was found immediately above the neck of the sac, being firmly held in this situation by the protruded omentum.

"The view was still more interesting when the abdominal muscles were divided and turned back. Then it was evident, that almost the whole of the floating portion of the omentum was thrust out. The part of the bowel pulled down to the neck of the sac, was the central portion of the great arc of the colon. The stomach was very much and forcibly displaced, being pulled down within a hand-breadth of the pylorus, so as to form a sort of constriction, as if there were two pouches to the stomach. The stomach was placed diagonally across the centre of the body towards the right side, the lowest portion being between the constriction caused by the weight of the hernia and the pylorus. This orifice presented almost directly upwards, and instead of its usual place, occupied a situation immediately below the middle of the gall-bladder.

From this description it is seen that the arch of the colon, in crossing the centre of the body through the hypochondriac and gastric regions, formed a semicircle crossing the lower part of the abdomen, and having the concave part of its sweep upwards, towards the stomach.

All other appearances were natural, if we except a considerable enlargement of the rectum along the upper part of the interior strait of the pelvis, the more remarkable from the turgescence, or rather congested state of the veins at this part and no where else. The spleen was very much charged with fat, and the large intestines peculiarly so. The liver was studded with black spots of various size, resembling the appearance of melanosis.

The ensiform cartilage in this subject was turned directly upwards and outwards, resembling a spur, and on a closer examination a cushion of dense fat was found, covering the point of the xiphoid process. This cushion was full three-fourths of an inch in length. I have recently seen a subject with two ensiform cartilages as large as the ensiform cartilage usually is, and an inch and a half long. The thyroid gland was also found in this subject distinct, and being, as we have most frequently found, to the left of the median line of the trachea, as described by Sömmerring."

#### M. GIPONTON's Case of *Pericarditis* \*.

A printer entered the hospital on the 1st Pluviose, year seven of the Republic, having been ill five days, but previously in good health. On examination, he presented the following symptoms, viz. 1. Some degree of facies hippocratica—circumscribed redness on each cheek, more especially the left—tongue changed—some abundant expectoration, slightly tinged with blood—respiration embarrassed—sharp pain in the side, (point de côté), beginning from the left across the lower portion of the sternum to the left, and increased by pressure—obscure sound, on percussion, over a considerable space of the left side, almost the whole of the left side sounding well—constipation—scanty urine, of a turbid appearance, with red sediment—skin dry and burning hot—pulse small, quick, irregular, and intermittent. Venesection, during the first two days passed without any remarkable changes, the countenance becoming daily more hippocratic. In the evenings there were exacerbations of the symptoms. 5th. There was nausea added to the other phenomena. An emetic prescribed, not without dread consequences. It was determined to follow up this measure. The emetic did no good—the patient was entirely deprived of sleep, being obliged to sit constantly upright in bed. In a deplorable condition he lingered out some ten days more, and on the 23d day, from the invasion of the disease. Dissection.—“The brain sound. On cutting through the ribs of the thorax, a quantity of purulent matter escaped, evidently flowing

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\* Medico-Chirurg. Review.



from the cavity of the pericardium, which had been opened in the section of the ribs. The pericardium was of a very large size, and was computed to contain about a pint and a half of the purulent fluid. Its internal surface was coated with a thick layer of albuminous and puriform matter, with red spots interspersed. The heart was not enlarged, but its pericardial covering was thickened to the extent of two lines—a very unusual circumstance! The muscular structure of the organ did not appear to have undergone any change. The lung, on the left side, though much displaced by the enlarged pericardium, was otherwise sound. The lung on the right side was hepatized posteriorly, and covered with a lymphatic exudation. The interior coat of the stomach was inflamed and thickened throughout its whole extent, especially towards the pyloric orifice, which had the appearance of schirrus. Externally, the stomach appeared quite sound.

"It is probable, as M. Tacheron observes, that the period of acute pericardial inflammation had passed before this man's entrance into the hospital; and that purulent secretion or effusion had commenced, when, of course, the disease was incurable. The phenomena of the complaint, however, were strongly characteristic of its nature and seat—consequently the case is a valuable document, and worthy of record."

#### *M. PIED'S Case of Pericarditis\*.*

"Charles Lorrain, 43 years of age, of good constitution, and always having enjoyed excellent health, was seized, on the 20th of May, with difficulty of breathing—shivering—cough, with little expectoration—pain extending from the epigastrium to the right hypochondrium—fever, with exacerbation at night. Received into the hospital on the 22d; he presented the following symptoms, viz. face of a yellowish red colour—features contracted—slight convulsive motions of the fascial muscles—moist tongue, white in the middle—respiration very much impeded, laborious and quick—slight cough—trifling expectoration, of no particular character—no stool for two days—epigastrium and right hypochondrium painful on pressure—slight heat of skin—pulse small, contracted, quick, regular. Two bleedings from the arm—diluent—calmants. The pain in the part above-mentioned was mitigated by the bleedings, and a blister removed it entirely; but the other symptoms were not relieved. The night between the 23d and 24th was passed in a state of great agitation and delirium—and at four o'clock in the morning he expired."

*Dissection.*—"The left lung was sound, except that its inferior surface was covered with a recently formed crust of coagulable lymph. The inferior lobe of the right lung was similarly circumstanced, and, in addition, was engorged as after severe peripneumony. The whole of the thoracic surface of the diaphragm, and the posterior portion of the pleura were covered with an inflammatory crust, rather thin, and easily elevated, leaving the subjacent tissue reddish and

\* *Medico-Chirurg. Review.*

**injected.** The abdominal surface of the diaphragm was perfectly **sound.** The exterior surface of the pericardium was also covered with coagulable lymph, to a considerable extent, and the structure underneath very finely injected. The pericardium itself was filled with a serous, or whey-like fluid; and some of the same fluid was extravasated in the cavity of the chest. The internal surface of the pericardium, (both its loose and reflected portions) was covered with an inflammatory crust. The muscular structure of the heart was **sound."**

It is evident, says Dr. Johnson, that here we had an exquisite case of pericarditis, and yet some of the characteristic symptoms of the disease, as laid down by authors, were wanting, viz. syncope, irregularity of pulse, burning pain in the region of the heart, &c. On the contrary, the pulse was regular; there was no very violent pain in the region of the heart, and syncope did not exist.

**DR. BRANDRETH'S Case of Hydrophobia\*.**

"John Threlfall, aged eighteen, of a strong healthy constitution, was bit in November on the finger by a dog known to be rabid, which after bit a man who died of hydrophobia the succeeding spring. He was seized on Wednesday the 13th October, nearly eleven months after he was bit, with the dreadful symptoms.

"On the morning of Friday," says Dr. Brandreth, "he was suffering under violent and incessant spasms of the diaphragm and stomach; continued but ineffectual attempts to vomit; occasionally spitting out, with extreme agitation, a little frothy saliva. He endeavoured to strike every one that came near him; but requested his father and brother to hold his hand that he might not injure them. In a short time he became quieted, but expressed great anxiety at any person passing or moving near him. His pulse at the wrist was quite imperceptible, but the action of the heart very violent, and so rapid as not to be counted; the lower jaw was fixed upon the breast, and the expression of the countenance was indescribably horrid. It was the opinion of every one present, that a very short time must terminate his sufferings. It was agreed, however, to inject the acetate of morphia, into the veins, as recommended by Dr. Booth; and the detail of the case will shew the effects produced by it.

"At 2 o'clock, 24 minims were injected with a little warm water into the orifice which had been made when he was bled in the morning. This was accomplished with much difficulty, as he became again very violent, and it was necessary to restrain him by absolute force. In a few minutes he was more composed, and told his father he should live a little longer. His pulse became distinct, 140, and the action of the heart had considerably diminished.

"At 20 and 50 m. past 2, the same injection was repeated, which he allowed to be done without opposition; the pulse was now 120,

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† Edinburgh Medical and Surgical Journal.

and tolerably firm. Some brandy and water was injected into his mouth with a syringe, but he threw it out with great force. He continued frequently spitting, but endeavoured not to hit any body with it. He now shewed his tongue without difficulty, which was excessively dry, and a little furred, and he spoke and answered some questions that were put to him.

" *At 15 m. past 3*, two moxas were applied over the stomach; he remained perfectly quiet during the time they were burning, and said he felt relieved.

" *45 m. past 3*, 30 drops were injected. He now eat some bread and butter without difficulty, and attempted to drink some ale, when the convulsions were renewed as soon as the glass was in his hand; but in a few minutes he took a spoonful with great exertion. The pulse was 140, and distinct; his countenance seemed much improved; he conversed with apparent ease. Pouring water into a basin produced no uneasiness; and when some was splashed on the floor, he merely raised himself to look at it. He complained that his throat was dry, and he had nothing to spit out.

" *20. m. past 4.*—Rational and composed; pulse 150, and very weak.

" *40. m. past 4.*—Two more moxas were applied, which appeared to give relief; the action of the heart was moderate, pulse 120; he talked a good deal in a collected manner, and was not at all affected by persons sitting on the bed, or walking about the room.

" *30. m. past 5.*—Injected a pint of warm water into the vein; his pulse was 90, distinct, and the action of the heart natural.

" *30 m. past 6.*—30 minims of the acetate were injected: soon after the pulse was 100; the tongue moist and clean; he shewed it without difficulty; but had occasionally slight startings. At this time he appeared so much relieved, that some of the gentlemen began to entertain hopes of a favourable result. He continued in this state for an hour, when the pulse became gradually feeble and slow; and when he endeavoured to put his tongue out, it was twisted round in such a manner as to shew the under surface.

" *8 o'clock.*—The pulse was imperceptible, and he was bedewed with clammy perspiration. Another injection of  $\mathfrak{z}$ viii. of warm water was had recourse to. There was a considerable quantity of air distinctly felt in the cellular substance about the chest; he made frequent violent attempts to vomit; the teeth were firmly fixed together; and at half past eight the countenance became of a leaden hue, and he died in a strong convulsion. The body was examined at 7 o'clock of the following morning, 10 hours after death."

*Dissection.*—"The vessels of the dura mater were gorged with blood; the longitudinal sinus was full of dark blood, mixed with globules of air; the ventricles contained half an ounce of fluid the brain was very firm, and studded with numerous red points, the choroid plexus unusually turgid; the cerebellum was remarkably vascular, and part of the cineritious substance in a pul-

state. The blood was coagulated in the lateral sinuses, but not in the longitudinal. On lowering the head, a considerable quantity of fluid escaped from the spinal column\*. On opening the integuments of the throat, the cellular membrane was found distended with air, which was ascertained, by inflating the lungs, not to proceed from them. The small intestines were quite blown up with air, and exhibited marks of incipient inflammation on their entire surface. The omentum and colon were quite out of sight, and the latter so knotted and small, as in many places to be incapable of admitting the little finger. The upper and outer surface of the stomach was healthy; but upon lifting it up, a large perforation was discovered, capable of admitting the closed hand, from which a clear-coloured fluid had escaped into the abdomen. The pericardium contained 3ss. of fluid, and was highly vascular. The right auricle and ventricle were distended with coagula, and the left entirely empty. The cellular and adipose membrane surrounding the aorta contained air. The lungs, liver, diaphragm, kidneys, and bladder, were perfectly healthy. The whole pharynx and trachea were highly inflamed, and the back of the throat was covered with bloody and frothy mucus. The lower part of the œsophagus was deprived of its mucous membrane. The stomach, in general, exhibited considerable marks of disease, and there were many extensive spots of extravasated blood between the coats."

Dr. RENWICK's Case of *Hydrophobia*.†

"John Duckworth, aged fifteen, was bitten by a dog about a month before he was seized. He was blooded to some extent, had first mercury with opium and then solution of superacetate of lead, twenty drops on sugar every hour, according to the plan of Dr. Fayerman of Norwich. This, however, produced no visible amendment, and he died."

*Dissection.*—"Twenty-one hours after death, by Mr. Halton, in the presence of Drs. Renwick and Jeffreys, Mr. M'Donald, Mr. Jeffrey, Mr. Wilkinson, Mr. Reynolds, and others."

*Examination of the head.*—"Upon dissecting back the scalp, it did not exhibit any undue degree of vascularity. The inner surface of the calvaria was turgid with blood. The dura mater presented a general scarlet blush, and upon raising it from the surface of the tunica arachnoidea, a preternatural adhesion was observed parallel to the course of the longitudinal sinus, upon the left hemisphere of the cerebrum.

"The tunica arachnoidea was observed to be opaque in patches, but this appearance was not general. There was not any effusion beneath it, between it and the pia mater.

\* "Similar appearances have been observed in other dissections. The dissection was done without the consent of the friends. Owing to this, I regret I was not able to examine the spinal column."

† *Lancet*, May 28.

"The pia mater manifested a great degree of vascularity; a general vivid redness pervaded its whole surface. The vessels on the surface of the cerebrum were gorged with blood.

"Several horizontal sections of the substance of the cerebrum displaying its medullary structure, exposed numerous bloody points from which blood afterwards oozed; in fact, the substance of the cerebrum appeared injected with blood. Nothing remarkable was observed in the lateral ventricles, nor was there any deviation from the usual appearance in the plexus choroides of each side, or velum interpositum connecting them. In the commissura mollis no deviation from its usual consistency was noticed. The pia mater investing the cerebellum was very vascular, but the substance of the cerebellum did not partake of the vascularity; its consistency was softer than usual. The medulla oblongata was natural, the cauda vertebralis was very vascular. The bones of the skull were remarkably thin."

*Examination of the Neck, &c.*—"The par vagum, carotid artery and descendens noni were exposed, and no deviation from the natural appearance was observed. The cervical nerves were next examined, but the vascularity so strikingly evident in a former case (as published by Dr. Brandreth in the last Edinburgh Medical Surgical Journal, at the dissection of which I assisted), could in the least degree be traced, nor did the deep or superficial nerves in the vicinity of the cicatrix manifest any blush. No appearance of inflamed absorbents could be traced. As moxas had been applied to the cicatrices, and had taken deep effect, nothing could be distinguished beneath them\*."

*Examination of the Pharynx, &c.*—"The mouth, fauces, and pharynx were free from inflammation. The oesophagus did not present any unusual appearance until it approached the carina where there were considerable marks of inflammation, and so

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\* "I may here mention, that in consequence of some degree of importance being attached to a peculiar structure, which was found underneath the cicatrices, in the case of Mr. N., as related by Dr. Brandreth, I resolved to remove, from the case which occurred, some of this peculiar substance from beneath the cicatrix with a view to ascertain what effect it would produce by inoculation upon a dog and being called upon to open the body of a female who had died of this dreadful disease from the bite of a cat, I had an opportunity of carrying my resolution into effect. I found this peculiar appearance under the cicatrix, and removed two or three little bodies, of a brownish-red colour, resembling vesicles, and which appeared to contain a fluid. I did not open them, lest I should lose what might possibly be virus. A day or two elapsed before I procured a dog; when I found these bodies were dry; however, on the 23d of April, having exposed their interior by cross incisions, I inserted one upon the inner side of each hind leg, by passing a small scalpel between the cuticle and cutis previously, to make a space, then lodged one vesicle in each place thus formed, so far under the cuticle, that it was impossible for them to be removed, and afterwards applied adhesive plaster over the part. At the end of a week I removed the plaster; the wounds had healed, and no appearance was left. The dog, up to this date, the 9th of May, is, with the exception of a catarrhal affection, quite free from any disease."

spots of extravasation. The inflammation extended into the stomach for some way surrounding the cardiac orifice, and the extravasation was arranged in a curious speckled manner. Upon laying open the stomach, the inflammation and extravasation were not general over its mucous surface, but confined to the neighbourhood of the cardia. No aliment was found within it. The liver and spleen were healthy. The kidneys were remarked to be very vascular. The intestines were healthy with the exception of the ileum, which was found inflamed upon its inner surface, about six or eight inches from its termination in the cœcum, and within it there was a secretion resembling bird-lime in tenacity and colour. The exterior of the intestines in the vicinity exhibited a slight blush of inflammation."

*Examination of the Larynx, &c.*—"The larynx was natural in appearance. The trachea presented a slight blush of inflammation upon its inner surface at the lower part. The right lung was healthy. A number of firm adhesions were found in the right cavity of the chest. Upon the left side no adhesions were observed, but a considerable effusion of serum was noticed in the bag of the pleura. The pleura costalis of this side was inflamed; the pleura pulmonalis upon the upper and back part of the left lung was also inflamed, and the substance of the lung congested with blood. The heart and pericardium were healthy; but more than the usual quantity of serum was found in the bag of the pericardium.

"As in the case of Mr. N., the inflamed appearance of the nerves led to the examination of the spinal column; not observing anything peculiar in the nerves of the neck in this dissection, it was not considered important to expose either the spinal marrow or the nerves within the pelvis."

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## V. SURGERY.

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M. LALLEMAND on the *Diseases of the Genito-Urinary Organs*\*.

—What has already happened with respect to Aneurism and Hernia is now taking place as regards the diseases of the Urethra; the French surgeons are beginning to discover that they are behind those of this country; to adopt their opinions, and to imitate their practice, always, however, with such modifications as may enable them "to lay the flattering unction to their soul," that they are pursuing a path which no one has trodden.

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\* Observations sur les Maladies des Organes Genito-Urinaires. Par M. F. Lallemand, Professeur de Clinique Chirurgicale à la Faculté de Médecine de Montpellier. Paris, 1825. p. 215.

before them. To those who are moderately familiar with the works of Hunter, Home, Abernethy, Whately, &c., the Observations of M. Lallemand will present but little novelty, and it unfortunately happens that what little actually exists is not always very valuable or worthy of imitation. The present portion of his work is devoted to the subject of stricture in the urethra. It is composed, for the most part, of the relations of cases, remarks upon them, and criticisms on the Treatise of Ducamp, a work, the best parts of which are little more than copied from the English writers already mentioned. If we are to judge by M. Lallemand, it would appear that the French surgeons are likely to run from one extreme into another, and to convert their general proscription of the use of caustic in diseases of the urethra, into a system of indiscriminate application equally injudicious and very likely to be prejudicial.

M. Lallemand employs it to an extent which we believe was never at any time very general in this country, and which at present is most certainly universally reprobated. He takes much credit to himself for the contrivance of a curved tube with a stilet carrying caustic at the extremity, and intended to apply the lunar caustic in the more remote parts of the urethra, particularly the membranous and prostatic portions. It is ingenious, it must be allowed, and by no means complicated; but a thing of much more consequence is the consideration of the question how far the use of the caustic in such situations is proper or necessary. We believe that the best practitioners of this country are unanimous in the opinion that stricture of the prostatic part of the urethra seldom or never occurs, and that it is by no means frequent in the membranous. This may suffice to give the means of forming a judgment at once on the necessity and the applicability of such treatment.

The following abstract of a case will prove that we have not exaggerated in our statements of M. Lallemand's practice. It is he conceives that he found no less than seven strictures: of these, the first was fourteen lines from the orifice of the glans and required ten cauterizations; the second was of twenty lines, between three inches and four inches, eight lines, from the glans; it required eleven cauterizations: the third extended from five inches, to five inches four lines, and required two cauterizations; the fourth, extending from five inches and a half to five inches and three quarters, also required two cauterizations; the same number was needed for the fifth, extending from six inches to six and a quarter; the sixth stricture was the narrowest and of oldest standing; it was an inch and a half long, reaching from six inches and a half to eight inches, and

this, caustic was applied eighteen times: the seventh was only two or three lines in length; it was seated eight inches and a quarter from the opening of the glans, and gave way to two cauterizations. Farther than this the prostatic portion of the urethra, though not contracted, is said to have been fungous, and to have needed two applications of the caustic. The length of the canal in this case was, according to M. Lallemand, nine inches and six lines; and the total extent of the contracted portions, five inches, eight lines. It should be noticed that the inches are French. The total number of cauterizations was forty-nine, all comprised within the space of four months.

The extent of M. Lallemand's information on the subject may be estimated, when it is mentioned that every thing he says clearly proves that he is fully impressed with the idea that the caustic *bona fide* burns its way through the parts to which it is applied. In the case just quoted, he invariably speaks of the portions of coagulated mucus discharged from the urethra after each time that the nitrate of silver was employed, as though they were sloughs, or, to use his own expression, "*espèces de lambeaux de chairs*." A suspicion of the real nature of the occurrence does not appear to have entered his mind.

He insists much on a circumstance which certainly deserves attention, viz., the superiority of his and M. Ducamp's mode of applying the caustic to that practised in England. In the former, the caustic being attached to the extremity of a stilet, moving in a catheter-like tube, open at each end, may be introduced into the very centre or any other part of the stricture at pleasure; whilst with us, on the contrary, being fixed to the end of a bougie, it acts only on the anterior part of the disease, and that with less certainty and effect.

M. Lallemand has taken the pains to have drawings lithographed of various moulds of the forms of the strictures in the cases he has related, without any utility that we can perceive. It must be allowed that they present every variety of form. The cases are, many of them, interesting in themselves, but not by any means new or generally instructive; though it must be recollected, that in point of novelty, the remarks we have made cannot be considered strictly applicable as far as regards the information possessed by our author's countrymen in general.

**Dr. OESTERLEN'S Case of a Foreign Body expelled from the Trachea.**—This was a case in which a foreign body was expelled from the trachea; attended by Dr. Oesterlen, district physician



in Murrhardt, and communicated, with remarks and additional cases, by Dr. Von Klein, of Stuttgart\*.

On the 9th of April, 1821, a child of seven years, introduced a bean into its trachea. The most formidable symptoms of suffocation immediately ensued, but subsided in a few minutes, nothing remaining but an acute pungent pain between the sixth and seventh ribs, on the left side of the chest. In four hours the symptoms of suffocation returned, but lasted only a few seconds; respiration, however, became short, quick, and difficult; the child was unable to make a deep inspiration; it preserved the erect posture with the head thrown back, and had a croupy cough; the pulse small, quick, and hard. The bean had evidently stuck in the left bronchial tube, and by that means kept up inflammatory and spasmodic symptoms.

Bleeding, and the ordinary pharmaceutic and dietetic measures were employed. At the end of eleven days, during which symptoms of suffocation had often returned, the state of the patient improved. On the 23d of April, however, she was suddenly attacked with violent spasm of the trachea, and with cough, threatening suffocation, so that she became blue in the face, and several persons were required to keep her in the erect posture. At this time the bean was distinctly heard to rattle up and down in the trachea. Suddenly the patient fell into a state of asphyxia, and sunk back on the bed apparently dead. In a few seconds she raised herself up, and the same alarming scene was renewed. Dr. Oesterlen now proposed the operation of tracheotomy as the only resource, but confesses that he felt pleased that the refusal of the parents extricated him from the task of performing it, as he considered that it would not only have been rendered difficult, in consequence of an enlargement of the thyroid gland, but also, that the bleeding would have proved as dangerous as the disease, besides its being doubtful if he could eventually have extracted the bean.

The patient was now, by her own desire, and that of her parents, resigned to her fate, with nothing more than the application of six leeches, poultices to the neck, &c. This treatment was continued until the 27th, the state of the patient not deteriorating, and on the contrary becoming more tranquil at intervals. At four in the afternoon of that day the bean was luckily expelled in a violent fit of coughing, and was found very much swelled, but not otherwise changed. The patient completely recovered.

Without stopping to remark on the reprehensible timidity of

\* Graefe u. v. Walther's Journal, B. 6 St. 2.

**Dr. Oesterlen**, we shall quote the remarks of Professor Graefe :—  
“ I consider,” says he, “ the case above related the more remarkable, as a similar one, at Berlin, terminated very differently. In it death occurred suddenly, and almost without any previous alarming symptoms. According to the report of those present, the patient, a girl of six years of age, had slipped a bean into the trachea, but at the time she was seen, no symptoms presented themselves to establish the correctness of this report. The patient was closely watched, and every thing kept ready for tracheotomy. Whilst perfectly well, however, and actively engaged in playing, symptoms of suffocation occurred, and proved so speedily fatal, that the surgeon, living upon the spot, and arriving immediately, was unable to effect her resuscitation. On dissection, the swollen bean was found, not in the trachea, but so firmly wedged in the upper part of the right bronchial tube, that even when the canal was completely laid open, there was some difficulty in extracting it.”

**Dr. Klein** proceeds to remark on the case of **Dr. Oesterlen**, by allowing that cases do occur in which foreign bodies are expelled from the trachea at the end of some weeks, or even months, without any bad consequences. Such cases, however, bear a very small proportion to those which terminate fatally, and have no claim to the rank of precedents ; whilst, on the other hand, the number of instances in which foreign bodies have been successfully removed by operation is much greater, and consequently forms a ground for recommending its more frequent adoption. It is not to be denied also, that cases occur in which the operation fails to afford relief ; the foreign bodies either not being to be found, or not admitting of removal. This objection, however, is applicable, not only to this, but to every operation, as any, however strongly indicated, may fail in affording relief. It is evident that there is too much apprehension with regard to this intrinsically easy operation. As far, says he, as my individual judgment extends, I should not have hesitated to operate in the case above related, nor should I have been deterred by the state of asphyxia. In such cases, from the fear of risking a little, every thing is risked. Looking only to my own experience, I have, in my *Chirurgische Bemerkungen*, Sect. 168, and in Vol. I. pt. iii., p. 441, of this Journal, two cases, in which the patients, both children, were irrecoverably lost by trusting every thing to nature.

The most precise indication for the operation is, as in the present case, the alternate ascent and descent of the foreign body in the trachea, together with the impending danger of suffocation. Should it fail, nothing can be reproached to the surgeon, whilst, on the contrary, no credit can accrue to him even in the case of

a favourable termination, when it has been resigned altogether to the efforts of nature.

Neither do the swelling of the thyroid gland and the bleeding to be feared from its division, form any reason for not performing the operation. Here again experience sufficiently proves not only that the operation may be performed under such circumstances, but also that they do not form any counter-indication, (See the *Chirurgische Bemerkungen*, p. 168.)

To this case he has appended two remarkable and peculiar ones, in neither of which, however, as will be evident, was the operation indicated.

A piece of bone, with some cartilage, slipped about eight years back into the trachea of a man aged about 30. He immediately felt acute pain on the right side of the chest, his breathing became difficult, and he was unable to lie in any other posture than with his body bent to the right side. His stomach was emptied by a powerful emetic, but without any effect on the piece of bone. For three days and nights he continued in the same state, without sleep, notwithstanding the use of tranquillizing, resolvent inhalations, &c. He had also a constant cough, with a clear whistling sound, by means of which some portions of cartilage were expelled on the third day. The pain in the upper part of the chest, probably in the upper lobe of the lungs on that side, still continued the same. The medicines were continued, together with bleeding, leeches, liniments and cataplasms. On the seventh day, as he was drinking a few mouthfuls of wine for the first time, he was attacked with a violent fit of coughing, during which a pyramidal-shaped portion of bone was expelled. The pain instantly ceased, and only a little bloody mucus was spit up during a few days. He perfectly recovered, the only thing remaining being a dull sensation at the seat of the original pain whenever the weather happens to be moist. The piece of bone, even when it had shrunk in drying, was upwards of five lines long, and three thick at its basis. There can be little doubt that it had entered the right bronchus and had become fixed at the division, its diameter preventing it from passing farther.

E. W., aged 13, on the 3d of March, 1821, leaped over a brook whilst chewing a dried plum: at that moment the stone stuck in his throat, causing pain in the upper part of the right side of the chest. On reaching home his friends struck him back, according to the vulgar practice, and made him eat, as it was supposed that the stone was in the gullet: in swallowing he thought that it was pressed lower down, and that the pain was lessened. He had, however, a violent cough, and fre-

quently spit up some blood ; his breathing also was somewhat difficult ; but there were not any means of ascertaining the precise situation of the foreign body, and of the air passages. The cough continued for some days, but it was impossible to give up the idea that the stone might actually be in the stomach. The little relief, however, afforded by evacuating and tranquillizing measures, together with an emetic, appeared to indicate that it must be in the air passages. The cough recurred periodically with violence, and sometimes with spitting of blood ; there was usually an acute pain on the right side, sometimes higher, and sometimes lower. His breathing was not very difficult, and he was free from fever. On the 24th of March, when the cough had been tolerably quiet for some days, and the pain had altogether ceased, having leaped off a ladder, he felt something move on the right side for the first time. .

About noon on the 25th, he was seized with a violent spitting of blood ; at which time, feeling something move in his neck, he requested to be struck on the back, and in that way suddenly expelled the plum-stone at the end of 23 days from the time it was swallowed. The spitting of blood, pain in the chest, and difficulty of breathing immediately ceased ; the cough gradually diminished ; totally vanished in a few days ; and the youth recovered completely.

The plum-stone was found to be nine lines long, six broad, and had a very sharp edge.

*Dr. Pockels' Case of Medullary Sarcoma of the Eye-ball.*

Dr. Pockels has related this case, which he witnessed in London, in company with Drs. Savenko and Salomon, of Petersburg, for the purpose of proving the correctness of the statements of Mr. Wardrop on the mode of origin of this disease in the ball of the eye ; statements, of which Professor Von Walther had expressed some doubts in a paper on scirrhus, medullary sarcoma, &c, contained in one of the preceding Numbers of *this Journal*.

The patient, Robert Tyler, was perfectly healthy until the age of eighteen months ; he then, without any evident reason, became capricious, dull, sleepy, and indisposed to play : his appetite and digestion remained unaffected ; no appearances of disease presented themselves, and it was not until his third year that his parents were induced to seek advice on account of a remarkable enlargement of his head. They were informed that there was reason to suspect the existence of chronic hydrocephalus ; purgatives were regularly administered during some months, but without producing any evident change in his condition, and at last the disease was left to itself.

In April, 1820, his friends remarked that he squinted with the left eye, which however was not perceptibly defective. Observing him more closely, they found, in July, that the left eye was blind, and remarked a white glistening colour in the back part, which they took for a cataract. Mr. Wardrop was consulted, and explained to the parents the dangerous nature of the disease, together with the necessity of extirpating the eye in order to save the life of the child. The parents refused their consent as the child had not complained of pain, as he was otherwise apparently well, and as several other surgeons who were consulted considered it very reprehensible to perform so serious an operation for what they thought a trifling disease. In the course of September and October they observed a gradual progress of the glistening white surface in the back part of the eye into a slightly convex yellowish-white projection. Mr. Arnott who was now consulted; recognized the disease as a medullary sarcoma of the eye, and informed the parents that the disease was of a very malignant nature, but that life might be preserved by removing the eye.

On the 28th of November Dr. Pockels saw the child by the kindness of Mr. Arnott, who assured him that he had several times observed the progress of medullary sarcoma in the manner Mr. Wardrop has described it, and was in that way enabled to give so decided an opinion on the nature of the case.

The child was then of the usual size for his age, (4 years), with fair hair, blue eyes, and very white skin. His head was proportionally too large for the rest of his body, though he was fat; the forehead particularly large and prominent. He had a placid look, delicate complexion, and by no means an unhealthy appearance. He had for some time shewn a disrelish for the amusements of his age; he was, however, not at all shy, and answered readily and distinctly, though slowly, the questions that were put to him. His memory was weak and his conception slow, but he seemed capable of communicating his feelings with perfect precision; excepting the blindness of his left eye his senses appeared perfect. He did not complain of pain either in the head or eye. His appetite, digestion, urinary and cutaneous secretions, were regular, except that his parents sometimes remarked a considerable sweating on his head during his sleep. He slept longer than his sisters, both older and younger, and also slept for some hours in the day time. His pulse was regular but quick, 100 to 110, somewhat hard, but not full.

He willingly permitted an accurate examination of his eyes, and sat perfectly still for half an hour whilst a drawing of them was made, without appearing surprised or annoyed. Both

yes appeared of the same size, and not protruding. In the right eye, with which both near and distant objects could be perfectly distinguished, the iris was of a fine blue colour; the pupil was round, black, regular, and readily contracted when exposed to the light.

In the left eye, there were several large vessels on the sclerotic, but no inflammatory redness of the ball of the eye and its appendages, nor any increased secretion from the Meibomian glands. The ball of the eye felt harder than on the right side. The iris was of a greenish-grey colour; the pupil very much dilated, irregularly round, and insensible to light. The cornea, aqueous humour, lens, and vitreous humour, were without the least trace of opacity, and through them could be seen a yellowish white swelling, which occupied about the posterior third of the ball of the eye. The convex surface of the swelling, projecting into the vitreous humour, was divided by depressions into three slightly convex segments, on which a delicate red network was formed by fine vessels.

"Among several thousand cases of diseased eyes," says Dr. Pockels, "I never witnessed any similar change of structure. It is so remarkably different from the metallic-glittering, white surface of the eye, which I have on various occasions seen Beer point out as the amaurotic cat's eye, from the muddiness of the posterior chamber in glaucoma, and from the opacity of the posterior capsule, that there is little room for error in establishing the diagnosis. By a moderate share of attention, too, the most perfect conviction may be obtained of the actual presence of a tumour projecting into the vitreous humour."

In the first days of December the child complained of a pain in the left eye and forehead; the sclerotic became more red, and the eyelids were a little accreted in the mornings. The approaching danger was to be expected from the more rapid progress of the disease was again pressed upon the parents, and they ultimately consented to the extirpation of the eye. The operation was performed on the 7th Dec., by Mr. Wardrop, in presence of Mr. Arnott, and several other surgeons, together with Drs. Pockels and Savenko, to whom Mr. Wardrop committed the anatomical examination of the parts removed.

After removing the cellular substance and fat, together with the remains of the muscles, they found the ball of the eye of its usual size and form. The optic nerve was divided obliquely, and so close to the sclerotic, that a portion of the membrane was wanting in the space of about half a line on the outer side, and close to the insertion of the nerve. Through the opening thus made, a whitish pulpy substance could be readily pressed from the ball of the eye. The latter was carefully divided from before backwards,

giving issue to the limpid aqueous humour. The cornea and sclerotica were of their ordinary thickness and firmness; the lens, capsule, and vitreous humour sound, transparent, and of their natural consistence. The ciliary processes and uvea, seen through those transparent parts, had their usual black-brown colour. The posterior half of the eye was occupied by a tumour, the divided surface of which exactly resembled in colour and consistence the cortical substance of a child's brain. The greater part of the vitreous humour was removed, in order to examine the connexions of the tumour with the membranes of the eye. The sclerotica could easily be separated from the choroid. In the choroid, about three lines from the entrance of the optic nerve, was a round hole, a line in diameter, through which a small prominent part of the swelling touched the sclerotica, without however being connected either with it, or with the thin edges of the hole in the choroid. On the opposite side to this hole, and also about three lines from the entrance of the nerve, a thin layer of pulpy substance, of the size and shape of a lentil, was firmly attached to the outer surface of the choroid; there was not any appearance of disease on the spot of the sclerotica corresponding to it. These two places excepted, the structure of the choroid was unchanged. The retina was detached from the ciliary processes, and raised up from the inner surface of the choroid. It retained its ordinary milk-blue colour to the vicinity of the tumour; there it became a perfectly transparent and extremely fine membrane, firmly attached to the convex surface of the tumour, projecting into the eye, and on the centre of it could only be distinguished as a fine net work, like a spiders web. In raising the retina, the swelling was so readily detached from the inner surface of the choroid, that no organic connexion could be discovered between them; and although the tumour lay in immediate contact with the choroid, the latter retained its black pigmentum every where except at the hole already mentioned. It was only at the entrance of the optic nerve that the connexions of the tumour, consisting of a number of delicate firm fibres, could be detected. It is therefore probable, that the morbid structure arose from the lamina cribrosa; that it extended itself into the medullary membrane of the retina, originally in a thin layer, similar to that actually existing on the outer surface of the choroid; that by its increase, it pushed the cellular membrane of the retina before it became consolidated with it; and lastly, by its pressure caused in absorption of the vitreous humour, and of a small spot in the choroid. It does not admit of any doubt that the sclerotica, at the point where the choroid was absorbed, would have been de-

stroyed before the protrusion of the tumour through the cornea, and, consequently, that the fungus would have made its appearance at the side of the eye.

Mr. Wardrop considered the case as one of fungus hæmatodes, the medullary sarcoma of Mr. Abernethy. Dr. Pockels possesses one half of the ball of the eye preserved in spirits.

A moderate degree of fever followed the operation, but no bleeding within the first fourteen days. At the end of a month, a luxuriant bleeding fungus presented itself, gradually filling up the orbit, and projecting between the eyelids to the size of a hen's egg.

Repeated and considerable hemorrhages accelerated the approach of death, which took place in the fourth month after the operation. Dissection was not permitted.

On this case, Dr. Pockels remarks, that setting aside the high probability of co-existing disease of some part of the brain, the unfavourable termination cannot be adduced as an argument against the extirpation of the eye in the early stages of medullary sarcoma, as unquestionably a part of the diseased structure, remained in the orbit or the optic nerve.

With respect to the doubt expressed by Von Walther, as to the possibility of observing the disease at the bottom of the eye, in an early stage, Dr. Pockels, for the purpose of explanation, quotes the well known work of Mr. Wardrop. That gentleman says, at page 15, "I have seen in *some cases* the choroid coat pushed before it (the tumour);" and afterwards—"in *some cases* the choroid coat is found in its natural situation, having no attachment, or apparent connexion with the tumour contained without it."

Long before the appearance of Mr. Wardrop's work, and subsequently, the presence of medullary sarcoma visible in the bottom of the eye, through the pupil, has been observed in various ways. Hayes\*, in 1765, saw and described the occurrence of this disease in the right eye, after the left had been extirpated for a supposed cancerous affection. The child died, and on dissection it was found that the yellowish white colour, remarked in the bottom of the eye during life, was produced by a tumour projecting into the transparent vitreous humour. Saunders also, in his work on the diseases of the eye, gave, previous to Wardrop, very accurate descriptions and representations of specimens of medullary sarcoma, visible at the bottom of the eye previous to protruding through the cornea; to which more instances

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\* Medical Observations and Inquiries. By a Society of Physicians in London. Vol. 3. p. 120.



have been added in a new edition \*. At a later period, Scarpa†, from his own observations explained the occurrence of this disease in the ball of the eye in a similar manner.

DR. GODMAN on the Introduction of Straight Catheters.

"Having received," says Dr. Godman, "from Professor Brown, of the Transylvania University, on his recent arrival from Paris, an account of Civiale's operation for the removal of stone, with the *lithon- triptor*, which is used through a straight tube passed into the bladder through the urethra, I made some experiments to ascertain the practicability of introducing a *straight* instrument. For this purpose I chose the largest sized flexible metal catheter, which, though easily straightened in the hand, cannot be bent by any degree of force that could with propriety be used on the urethra. The diameter of this tube was three-eighths of an inch. My surprise was very great to find that this instrument, perfectly straight, could be introduced without *any* difficulty, the subject being extended on its back on the table, and the legs bent so as to allow their weight to rest on the soles of the feet. By passing it almost perpendicularly, until its extremity was made to project at the bulb of the urethra, then drawing the penis up on the catheter and slightly withdrawing the instrument, and at the same time depressing the point of the penis for two inches, or a little more, the catheter passed into the bladder with ease. The same experiment was repeated on all the male subjects then in the Rooms, in whom the urethra was uninjured, and it has been since repeated on several others. It is not to be expected that the same ease of introduction will be allowed on the living man, as the irritability of the parts will provoke a considerable disposition to spasm in the muscles of the bulb, perineum, and neck of the bladder. Neither do I think, as a general rule, that the catheter of the largest size can be used; still the muscles may be gradually accustomed to the action of the straight catheter, or they may be relaxed and rendered quiescent by the injection of a tobacco clyster into the rectum, the introduction of a suppository of tobacco, or, possibly, by the use of an injection of laudanum. Whether Civiale's operation ~~be~~ immediately followed with all the advantages expected, or not, ~~we~~ have reason to hope that the introduction of the straight catheter will doubtless be of great use in various affections of the bladder, as it is more manageable than the common curved instrument.

Where there is no deformity of the urethra produced by stricture, ulceration, or tumours within the pelvis, there is never any difficulty of introducing an instrument into the bladder, provided the operator *knows* the actual condition of the structure of the urethra. In other words, where there is no deformity, the difficulty is pro-

\* Saunders' Treatise on some Practical Points relating to the Diseases of the Eye. A New Edition by Farre. London. 1816. p. 145. &c, Cases 1, 2, 4, Tab 2. Fig 3, 4, 5, 6.

† Scarpa Trattato delle principali malattie degli occhi. Ediz. quinta Pavia. 1816. Vol. 2 cap. 8 Tav. 1 Fig. 2

luced by a vague notion of the anatomy, and an indistinct idea of certain mysterious manœuvres to be performed with the catheter. The catheter, curved in any proper degree, may be introduced by one acquainted with the structure, in the living subject, without any very perceptible change in the position of the instrument, or movement of the penis. In saying this, we leave out of the account the difficulty produced by spasmodic disposition in the muscles connected with the urethra, because this is to be overcome by patience, or by the use of antiphlogistic or anodyne remedies. In the common introduction of the catheter, the point of the instrument is passed down to the bulb, and then the bulb is doubled against the triangular ligament, or the operator, in attempting to execute the grand movement of depressing the penis and catheter, throws the point upwards, and catching it on the ligament, renders the introduction impossible. If it be recollected that the membranous part of the urethra is the continuation of the line of the upper surface of the urethra, and in the natural condition, is always held in the same place, there is nothing necessary to be done in the introduction of the curved sound, or catheter, than to stand on the right side, and with the catheter well oiled, pass it down the penis, keeping the external part of the catheter as much as possible in a line with the trunk of the body, whether lying, sitting, or standing, inclined obliquely outwards over the anterior superior spine of the ilium. When the curved part of the catheter is passed down low in the perineum, keeping the point of the catheter gently pressed against the upper part of the urethra, we straighten the penis slightly on the instrument, and pass it onwards into the bladder without difficulty.

“When the patient lies on his back, the knees should be bent, letting the weight of the limbs rest on the soles of the feet. When he is sitting he may rest his thighs on the edges of two chairs, and incline his body a little forward. If standing, it is only necessary to make the same inclination of the body, and separate the knees to a short distance, bending the thighs on the legs a little also. As to the correctness of these directions, I have nothing further to state than that I have this Winter taught students who never used catheter in their lives, to pass the instrument with ease and certainty in different subjects, in a quarter of an hour.”

*Dr. JOHNSON's Case of the Excision of Hemorrhoids.*

“A medical gentleman of this metropolis suffered nearly two years from this complaint. The fissure, or rather a small chronic ulcer, with hard raised edges, and a smooth surface, was discovered between two hemorrhoidal tumours that always came down on going to stool, by an eminent surgeon, who removed the ulcer by excision. The operation was excessively painful, and the removal of the hemorrhoidal tumours themselves was not deemed advisable at that time. A severe inflammation followed, the hæmorrhoidal tumours protruded,—became strangulated and sloughed. The suffering of the patient during the strangulation and sloughing of the

piles, which occupied five or six days, were indescribable. A large raw surface was left, and two fistulous sinuses were formed in the gut, which required two successive operations afterwards. These all ultimately healed in the course of two months, and the patient has fortunately got completely cured of an hemorrhoidal affection, that had harassed him for many years, and which for the last two years, had rendered his life a burthen to himself. During those two years he had never passed a motion of calibre larger than a finger, without exquisite torture; but since the operation, the gut has become nearly as free as at any period of his life. The complaint had produced much irritability of the bladder, which troublesome symptom has also disappeared with its cause."

*Ophthalmia Cured by Acupuncture.*

M. Cloquet lately presented to the Royal Academy of Medicine the case of a young woman, who had been affected for a very long period, with chronic ophthalmia of the left eye, with puriform discharge from the eyelids. The eye was constantly closed, and the affection complicated with acute pain in the orbit and in the head. A variety of means had been employed without success, when M. Cloquet had recourse to acupuncture. He inserted two needles in the temporal region of the same side; they caused but little pain, and at the end of a few days the inflammation had sensibly diminished; but it was especially the pain in the orbit and head which disappeared almost instantly. In a few days they again returned. He then introduced another needle into the middle of the forehead, and left it there. The eye speedily improved, remaining open, the pain disappeared. There existed at the same time an eruption on this side of the face which was almost entirely removed.

M. Husson communicated to the same body the case of a very stout man, who was admitted at the Hotel Dieu for an ophthalmia of the right eye, which was entirely closed and extremely painful. This inflammation, which had resisted during eight days all the most active remedies, disappeared very rapidly on the introduction of two needles into the thick part of the eyebrow, on the right side.

M. Nacquart afterwards communicated the case of a young lady affected with a painful ophthalmia of long standing, in which the acupuncture had been practised twelve days before, without any benefit resulting. It appears, however, that from the modification in the operation employed, it rather resembled the introduction of a seton, than the acupuncture properly so called.

*Dr. MARTLAND's Case of Staphyloma Cured by Tapping.*

J. Snape, aged 38, was seized with severe pain in the head while in his Majesty's service at Gibraltar, in 1812, terminating in quotidian intermittent, of two months duration. In April, 1820, Dr. Martland was consulted, and found a cataract of both eyes. In October he cut up the lens of the right eye, and pushed a small portion through the pupil. The operation was repeated twice, and

with complete success. On the 14th of December an oculist extracted the cataract from the left eye, with some difficulty, owing to partial adhesion of the capsule to the iris, which was unfortunately lacerated, with the escape of some of the vitreous humour. Prolapsus of the iris, with violent inflammation took place the first day after the operation, and continued upwards of six weeks, leaving the patient quite blind of this eye, though very active measures had been pursued to reduce the inflammation, and the unreduced portion of the iris was destroyed by lunar caustic. On the 10th April, he complained of pain darting through the left temple and forehead, with sense of throbbing, as well as of pain, at the bottom of the orbit of the left eye. The conjunctiva was very vascular, and a large tumour was situated on the ball of the eye, opposite the external canthus, when the eye was directed to the opposite side. The tumour resembled that of the sclerotic coat delineated in Travers's Synopsis, pl. 1. fig 7, but was rather broader at the base, and of a deeper colour. The iris lay very near the cornea, and had become adherent to it where the incision was made. After some preparatory measures, the eye was tapped by means of a small cataract needle, and some of the vitreous humour escaped. The pain was relieved in half an hour; but recurred in the night as bad as ever. The inflammation of the eye became more extensive, and the tumour increased in size. Bleeding, purging, calomel, opium, and antimony were exhibited. On another puncture being made in about three weeks after, viscid fluid escaped with much relief. The inflammation now subsided, and the man resumed his mode of weaving. In a few days the tumour again filled, and an additional tumour appeared, and the headache returned. On tapping the tumours much viscid humour was again evacuated, with instant relief. In a week, on a recurrence of all the bad symptoms, paracentesis was repeated with the usual good effects. We cannot follow the author through his diurnal detail of symptoms and operations; but on the 16th of August, we observe that Dr. Martland tried the paracentesis. He made a perpendicular incision through the coats of the eye, fully one-third of an inch in length, and about two lines and a half from the temporal edge of the cornea. A great quantity of vitreous humour soon escaped, causing the eye to sink good deal in the socket, and become very flabby. In spite of this the tumours soon filled again, and it was necessary to tap them six or seven times afterwards. On the 23d February, 1824, no vesicle of the tumours remained, nor has there been any pain or inflammation since; there is a cicatrix where the incision was made.

#### HOLBROOK on Hydrocele.

Mr. Holbrook, Surgeon to the Monmouth Dispensary, has just published a small work on hydrocele, recommending, instead of the radical cure, as it has been called, of Sir James Earle, a modification of the old seton practice. We shall probably attend to this mode of practice in next number. He

has, also, in the same work, made some ingenious remarks on bronchocele.

Mr. SHAW's *Supplement to his Work on Distortions of the Spine*.—In this addition to his former publications on this subject, Mr. Shaw has followed up the principles which he has before advocated. We may remark, that it seems to be intended as much for popular as for professional perusal.

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## VI. PRACTICE OF PHYSIC.

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### Dr. Good's *Study of Medicine*\*.

We are happy to perceive, from the early appearance of a second edition, that the opinion which we expressed in our Review of this admirable work, although in opposition to that of almost all the cotemporary journals, has been amply confirmed by the discernment of the profession; the first edition, notwithstanding its unavoidable high price, having been rapidly bought up. The outcry of a few noisy, conceited, shallow, and half-educated critics, that Dr. Good had not attended to foreign medicine, has only shown their own emptiness and his superiority as a physician, a scholar, and a philosopher. In America, the demand for this work, (to their honour be it said,) is even greater than it is here, no fewer than two large editions having been sold there in less than two years.

The edition now before us is very much improved, and nearly 400 hundred pages of entirely new matter have been added. There is not a chapter, indeed, and scarcely a page in which we do not trace numerous references to the most recent works of merit, up to the moment of publication, as well as to many of the older standard works which Dr. Good appears to have reperused on purpose to make his system as perfect as possible. In our opinion, he has succeeded in this great design, as far as it was possible for the learning and industry of an individual to do. We have no doubt whatever, that the reputation of the work will be much increased by the improvements in this edition, of which we shall give a more extended notice in our next Number.

With regard to the accusation brought against Dr. Good of not always detailing *post mortem* appearances, we shall give his own reply, which we think unanswerable.

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\* The Study of Medicine. Second Edition. By John Mason Good, M.D. F.R.S. &c. 5 Vols. 8vo. pp. 3236. London, 1825.

The only point of importance, hitherto suggested to him which has found a difficulty in acceding to, is that of introducing generally a description of the appearances offered by diseases on dissection. Whenever such appearances are strictly pathognomic, and throw a steady and intelligent light on the nature and treatment of a malady, he has endeavoured to give them; but he has hesitated to do so upon any other occasion for the following reasons: first, Because the present is not designed to be a sepulchretum, or like Morbid Anatomy; and would have been swelled to nearly double its extent, if such a connexion had been allowed. And, secondly, because, however valuable an expert practice in dissection may be to a student in the field of anatomy, in a pathological point of view, its developments, except where strictly applicable and illustrative, will more frequently perplex than instruct him. They rarely give him any information concerning the elementary or physical changes that have taken place in the animal fluids; and they lead him, in a thousand instances, to mistake effects for causes, result of symptoms or accidents for that of idiopathy, even in the most obvious changes of structure. The truth is, as M. Fodéré has lately observed, that by far the greater number of diseases are the effects of disordered vitality before they become organic; and when, at length, they assume such a character, it is as a consequence rather than as a first moving power. On which account this distinguished pathologist is disposed to place but little reliance on dissection; and to think very lightly of all the busy dissections and operative experiments that are at this moment going forward in France, whether upon living or dead animals. Perhaps this is considerably to undervalue such attempts; but let their importance be what they may, it belongs rather to the province of morbid anatomy to follow them up and illustrate them, than to such a work as the present; except in the class of cases already provided in which they may, unquestionably, be turned to an account of great use at present, and made productive of an abundant harvest."—*f. 2d Edition.*

*Case of Poisoning by Opium.* By Dr. BARENT P. STAATS\*.—Having lately seen the application of cold water highly recommended in cases of poisoning by *opium*, I take the liberty of relating the following case which lately fell under my care. On Monday, August 7th, a mulatto fellow took three drachms of *sovereign opium* for the purpose of destroying himself: he was discovered some hours afterwards lying in the woods, in a stupefied state, perfectly insensible. A physician was immediately sent for, who attempted to puke him, but to no purpose: finding his efforts unavailing, he abandoned him. I was then sent for, and when I arrived, found him, as it were, in the arms of death. His breathing was stertorous and oppressed, with every other symptom of approaching *apoplexy*. I immediately opened the jugular vein, and

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\* New York Med. and Chym. Journ

drew away twenty ounces of blood. I then commenced pouring cold water on his head, which I continued for the space of five minutes, when I was surprised to see him open his eyes, and appear sensible; but immediately on withholding the water, he fell asleep. I repeated the water as before, with the same effect; and by the constant application of the water at intervals of a few minutes for the space of six hours, finally succeeded in rescuing him from premature death.

*Additional Case.* By JOHN B. BECK, M.D.—“In addition to the foregoing case,” says Dr. Beck, “I am induced to record another of a similar character, in which the efficacy of this new method of treating persons under the effects of large doses of opium, was beautifully illustrated. On Friday the 15th of October, I was called, late in the evening, to an infant about two months old, to whom its mother had given, through mistake, twelve drops of laudanum instead of paregoric. Discovering her mistake shortly after, and being alarmed at the effects which it produced on the child, I sent for assistance to a neighbouring apothecary, who directed the administration of antimonial wine. A tea spoonful of this was accordingly given, but without the least effect in exciting vomiting. Shortly after this, and about one hour after the laudanum had been given, I first saw the child, and found it in a state of stupor, from which it could not be roused by any ordinary means. With a view, if possible, of still exciting vomiting, I immediately poured down a large dose of tartar emetic and ipecacuanha. After waiting a few minutes, and finding no effect, I commenced pouring cold water from a pitcher on the child’s head, which was held over a tub. In a very short time the child seemed to feel the impression of the water, and exhibited symptoms of returning sensibility. On stopping the applications of the cold affusions, it speedily relapsed into its former state of stupor. The water was again poured on the head, which soon roused it again, and during its use it vomited very freely. I now suspended its use for ten or fifteen minutes. Finding the symptoms returning, recourse was again had to the water, with the same effect. It roused the child, and again brought on vomiting. After this it gradually revived, and the next morning was as well as usual.

The credit of originality, with regard to this practice, has been very justly conceded to Mr. Wray, by whom it was announced to the public in 1822. It is due, however, to a professional gentleman of high respectability, Dr. Samuel W. Moore, of this city, (New York), to state that so far back as 1815, the very same practice was used by him with success.”

[This is another instance, in addition to the two which we have already mentioned in this Journal, that shews Mr. Wray’s practice is not new.—EDITOR.]

Dr. W. AINSLIE on the *Cholera Morbus of India*.—This author is favourably known to the profession by his work on the *Materia Medica of Hindostan*. This little work appears to be

written on scientific principles, and will require from us a more extended notice than we can here find room for. His investigation of the supposed bilious origin of cholera seems well worth perusal.

Dr. PARRY's *Posthumous Medical Writings*\*.—Although we are much pleased to see this collection of papers from the MSS. of the late Dr. Parry, yet we think the mode of publication is a very strange one. First we have his pathology, with a fragment of the second volume, then, in a ten shilling volume, an Introduction to "Collections from the unpublished Writings;" then one volume of these writings, to be followed by we know not how many more. No plan of publication could have been adopted more certain to injure the sale of the works. Of the Introduction we are preparing a review, and we shall take up the interesting subjects of the present volume in an early Number. The contents are General Anatomy and Physiology; Irregular determination; Inflammation; Fever; Cutaneous Affections; Dropsy; Hæmorrhage; Rheumatism; Gout; Affections of the Head; Hydrocephalus; Nervous Complaints; Hysteria; Insanity; Epilepsy; Apoplexy; Paralysis; Hemiplegia; Paraplegia; Paralysis of the extremities; Local Affections of the Nervous System; Affections of Speech, Taste, Smell, and Sight; Miscellaneous; Sciatica; Tic Douloureux; Tetanus; and Chorea.

## VII. MIDWIFERY.

Dr. HOSACK's *Case of Amenorrhœa* †:—The cure of amenorrhœa by injection, per vaginum, of a stimulant fluid, is getting daily into more and deserved repute. Dr. Hosack treated, according to this method, a case of ten years standing, which had resisted all the ordinary means of purgatives and emenagogues. Dr. Hosack employed an injection three times a day, of a drachm of liquor ammonia, diluted with eight ounces of rain water. The cure was completed in five weeks.

Dr. HOLSCHER's *Case of Extirpatio Uteri* ‡.—Madame Von C—, aged 30, of good constitution and full habit, the mother of four children, (having been married at fifteen, and enjoyed good health), miscarried during her fifth pregnancy, in consequence of an accident, which was followed by inflammation, vaginal discharge, cough, and pains in the chest. Examination,

\* Collections from the unpublished Medical Writings of the late Caleb Hillier Parry, M.D. F.R.S. &c. Vol. I. 8vo. London, 1825.

† New York Medical and Physical Journal.

‡ Gräfe und Walther's Journal der Chirurgie.



per vaginam, gave great pain, and was always followed by hemorrhage. The catamenia appeared every three weeks, and there were occasional hemorrhages. The uterus was found by Dr. Holscher to be surrounded by a fungus, and he determined on the operation.

"The bowels and bladder were first emptied, and the patient was then placed in the horizontal position, with the legs separated from each other. An assistant pressed down the uterus and pushed the intestines upwards, whilst the operator conveyed a scalpel along the middle of the fore finger of the left hand to the mouth of the womb. The instrument was then carried round the fungus, and the uterus separated from nearly the whole of its connexion with the vagina. The patient lost at this step of the operation, about five or six ounces of blood. The operator now introduced his left hand into the vagina, and seized the carcinomatous mass, but was unable to pull it down. Although the description of Sauter's operation had determined Dr. Holscher not to occupy himself much longer in attempting to effect a descent of the uterus, yet he judged it advisable to convince himself by one more trial, whether it was possible or not. The operator had provided himself with several pins of brass of the size of a crow's quill in thickness, about a foot in length, easily bent, and rather sharp at the point. One of these was conveyed, with the point slightly bent, along the fore finger of the left hand, and attempted to be pushed above the carcinomatous mass, into the cervix uteri. The left hand was then conveyed to the other side, in order that the instrument might be carried more easily through the cervix, the point of which the operator hoped he should be able to lay hold of with a wire forceps (or a piece of wire bent into the form of a forceps), and thus effect a descent of the womb. But he was soon convinced, that the carrying of the wire through the substance of the uterus, to its outer part, so as to meet the instrument would be attended with great difficulty and loss of time; and even if he succeeded in getting it through, it would most probably slip, and therefore he relinquished the trial. He then determined on immediately removing the carcinomatous mass, which considerably impeded the performance of the operation. A circular knife was then conveyed along the fore and middle finger of the left hand, to that part of the uterus from which the fungus had been torn off, and then carried, in an oblique direction, from right to left. After the extirpation of this mass, a hemorrhage, to the amount of two or three ounces, took place, which was, however, soon stopped by the application of a sponge moistened with vinegar. The uterus was now more easily to be got at, and the operator introduced a sharp pointed knife along its outer edge, as far back as the fungus. An opening being thus made, the circular knife was introduced, and the uterus separated from all its lateral connexions, after which it was easily removed. The operation lasted thirty-five minutes, and whole quantity of blood lost amounted to no more than nine or ounces. The intestines did not in the least protrude. Some

sponge was introduced into the vagina, and the patient conveyed to bed. Her hands, feet, and countenance were cold, and the patient was evidently much enfeebled by the operation. Some wine and water, together with an anodyne, were given. The patient passed a very restless night, and on the following morning was attacked with vomiting; the abdomen became distended, and in the lower part, painful to the touch; the pulse feeble; and in twenty-four hours after the operation she died.

"On opening the abdomen, not the slightest trace of hemorrhage was to be seen. The opening in the peritoneum had closed to the size of a hen's egg, and would have soon united if the patient had survived. There was no sign of carcinoma in any part, and the ovaries were quite natural. The intestines were distended with flatus."

**Dr. MANLY on Menstruation.**—In an elaborate investigation of this subject, our author comes to the conclusion, "that natural menstruation is an active hæmorrhage; that the discharge is blood, and, of course, that like all other blood, it will coagulate; and that, when it does not, the process of menstruation is deranged and depraved, and is to be attributed to the paucity of the discharge, or to such a diseased condition of the uterine vessels which afford it, as to allow a rapid separation of the blood into its constituent parts; in which case the coagulating lymph is deposited on the interior surface of the uterus, from which it is occasionally evacuated by the agency of the irritation which itself creates." It is no objection to this opinion, that the menstrual discharge, when fluid, does not always offer evidence of the presence of this fibrous or pulpy material; as, if it does not exceed in amount the quantity of coagulating lymph which would be separated in one, two, or even three terms, it may reasonably be presumed, to use a phrase of the late Dr. Hunter, that it would occasionally be melted down and pass off with the ordinary discharges unobserved. That this is frequently the case in dysmenorrhœa is beyond a doubt, and practical authors on the diseases of females, direct that this fact should be particularly inquired into, in order to the adoption of a proper plan of treatment.

**LIZARS on the Extraction of Diseased Ovaria\*.**—This is a splendid folio brochure, on a very interesting subject. Mr. Lizars details several cases in which operations were performed. In one case, by an unforeseen deception in the appearances, no diseased ovaria were found (see *Anderson's Journal*, No. 6. p. 283); in another, the operation was successful; and in a third,

\* Observations on Extraction of Diseased Ovaria illustrated by coloured plates. By John Lizars, Surgeon, author of the *System of Anatomical Plates*. folio. Edinb. 1825.

fatal. We must take leave to doubt the propriety, or rather the prudence, of publishing these cases at the enormous price of sixteen shillings. The plates are indeed splendid and apparently accurate; but we think a less expensive mode of publishing should have been chosen. In one of the cases, the abdomen was laid open from the sternum to the pubis, and an ovarium extracted, weighing above five pounds, eleven inches long, and seven and a half inches broad.

Dr. DAVIS' *Elements of Operative Midwifery*\*.—This seems to be a very laboured—we are certain it is a bulky and unwieldy work, and much too expensive for the usual run of buyers, particularly when very superior treatises can be procured at one half or one third of the price. Dr. Davis has introduced a description of certain new and improved powers for assisting difficult and dangerous labours, and added cautionary strictures on the improper use of instruments, but we cannot help thinking, that two guineas is a great deal of money to give for a book of this kind, even though its pretensions were greater, and its execution better than this—we had almost said—abortion of Dr. Davis. Our readers are well acquainted with the grand failure of this author in explaining the pathology of phlegmasia dolens, which he maintains to be an inflammation of the veins, on similar narrow views to those of Broussais, who thinks all diseases an inflammation of the gastric membranes.

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## VIII. MEDICAL JURISPRUDENCE.

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M. LASSAIGNE'S *Mode of Detecting Spots of Blood*.—From several experiments on this subject, M. Lassaigue concludes—  
 1. That it is easy to distinguish, chemically, the rust produced by blood upon iron or steel instruments, from ordinary rust.  
 2. That the spots produced by blood upon different tissues, may always be distinguished, even after the lapse of a considerable time.  
 3. That the application of these means may be useful on many occasions, where it is necessary for the ends of justice.  
 We subjoin one of his methods of treating the rust, the whole paper being too long for insertion in this place.—A small quantity of rust is to be placed in a glass tube, closed at one end, about an inch and a half long, and three lines in diameter, with one or two grammes of distilled water; by slightly agitating the

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\* *Elements of Operative Midwifery, &c.* By D. D. Davis, M.D. &c. 4to. London, 1825.

mixture, the albumen, a portion of the colouring matter, and all the salts are redissolved; when, upon allowing it to rest, the rust is precipitated. It becomes thick by agitation in the air; it reconverts reddened turnsole into a blue colour; it is coagulated by heat and acids; and by evaporating and calcining the residue in a platina spoon, chloride of sodium, subcarbonate of soda, and phosphate of lime are obtained\*.

**METAXA'S Case of Rape†.**—We consider this case of so much importance, that we shall give a very full account of it, for which we are indebted to Professor Chapman's Journal.

"It is scarcely possible to imagine a more interesting case in the whole circle of medical jurisprudence, than the one treated of in the work before us; where Signor Achille Crespi, a young man of excellent family and high character, was accused and *condemned* for the perpetration of a rape on the person of a girl not yet arrived at the age of puberty. The young man being arrested, on the accusation of the girl, an examination of the sexual organs of the plaintiff was made by three medical gentlemen and two midwives, who delivered the following Report thereon: they found 'the sexual organs *altered, tumid*, and at the entrance of the vagina the *hymen was entirely wanting*; the whole of the vagina was *irritated, inflamed*; and of a deep red colour, but *particularly so* at the point of the frenulum. The vagina was dilated in such a manner, *that a finger could be introduced with every facility*; and lastly, they had observed that there was a *copious discharge of purulent and sanguinolent matter*, by which, according to their skill, knowledge, and conscience, and on their respective oaths, &c. they conclude and *judge*, that the aforesaid girl had suffered the introduction of some hard body, as a horn, the membrum virile, or some similar instrument; *that she is perfectly and recently deflowered*; and that the above mentioned flux, by its quantity and appearance, might be derived from a mechanical injury, or actually from a gonorrhœa communicated.'

"A second and third examination induced them to confirm this opinion, and they concluded that the flux from the vagina had commenced about eight days before their first examination, and according to the oath of the girl, *immediately* after the rape. As the discharge had not yielded to the ordinary application of the antiphlogistic treatment, they infer it was caused by a 'syphilitic gonorrhœa.' On these Reports Crespi was condemned.

"The work before us caused this sentence to be reversed, and is one of the best pieces of professional criticism that we have seen for a long time. The examination of the evidence, and of all the collateral circumstances; the close scrutiny of the sources of error

\* *Revue Medicale*, Avril.

† *Dissertazione Medico-Forense riguardante la causa della Illmo. Sig. Achille Crespi accusato di Stupro immaturo.* Autore Luigi Metaxà pubblica Professore di Anatomia e Medicina Comparativa nell'Archiginnasio Romana della Sapienza, &c. Roma, 1824, Poggioli, 8vo. pp. 146.

in the opinions of the medical examiners, and the detection of all the facts that invalidate the accusation, are well worthy the attentive perusal of every one anxious to become acquainted with medical jurisprudence. We cannot present a better analysis of this interesting Memoir, than by giving a translation of the opinion delivered relative to it by a large number of distinguished Italian professors. It is not possible to avoid some scepticism relative to the entire innocence of the accused, as no attempt is made to rebut any other charge than that of the rape, but that the sentence was properly reversed, in consequence of this investigation, we are fully satisfied.

"We the undersigned, having separately read, and maturely examined the Medico-legal Dissertation, &c. of Professor Louis Metaxà, have found it reasonable, convincing, and most powerful in demonstrating the proposed object, and therefore have unanimously agreed in the following decision:—"The cause treated of, is reduced to two principal heads; to set aside the rape, and to demonstrate the pre-existence of *leucorrhœa* in the girl Vittoria Turchetti."

"The Dissertation of Professor Metaxà is divided into two parts; each part is subdivided into three chapters. In the first, after a brief introduction, he relates the most remarkable and authentic facts, connected and disposed according to the order in which they were presented; and hence shows how unreasonable, and contrary to the correct principles of science, and how injurious to the accused, were the legal proceedings that were the base and origin of the decision and condemnation.

"The first part of the second chapter treats of rape in general, and of the uncertainty of the signs of physical virginity, which he accurately distinguishes as physiological and anatomical; he shows that the want of the hymen and the dilatation of the vagina prove nothing, and that severe and fatal symptoms arise from a violent rape committed on a person not yet pubescent.

"He concludes, that in rape, in general, there are no infallible signs; but that when rape has been perpetrated on too young a subject, it leaves most marked and commonly indelible traces.

"In the first part of the third chapter he draws a judicious parallel between *leucorrhœa* and *gonorrhœa*. He treats chiefly of hereditary, metastatic, or vicarious *leucorrhœa*, described by various modern medical authors, and shows how frequent and common the vicarious *leucorrhœa* of different species, especially the *scrofulous*, is among children, of which he refers to various examples. Relative to the difficulty of distinguishing between the two diseases, (*leucorrhœa* and *gonorrhœa*), he observes there are two modes to decide properly between these discharges. The first consists in the difference of their sources; the *leucorrhœa* is constantly derived from the uterus; while the *gonorrhœa* does not extend farther than to the external organs; if it be washed off carefully, the place may be seen whence the gonorrhœal mucus flows; which supplies an argument to exclude the *leucorrhœa*, and the contrary. The second is

resented by the difference of the succession of the periods, since the gonorrhœa invariably runs through its stages and goes on decreasing from its inflammatory state to its decline ; the chronic habitual leucorrhœa, derived from internal causes, knows no periods, it increases and diminishes at indeterminate periods ; thus its essential and distinctive characteristic is irregularity and disorder. Finally, the fact of the state of *delitescence*, (or dormancy,) common to all contagious diseases, may, in many cases like this before us, aid us to avoid confounding one discharge with another.

“ He concludes that leucorrhœa in general, theoretically considered, does not differ from gonorrhœa ; but that in the present case its most evident characters, deduced from experience and from these examinations, were more than sufficient to prove that the discharge from this girl was leucorrhœal and not gonorrhœal ; moreover, the premature appearance and irregularity of the symptoms, exclude every suspicion of gonorrhœa, and demonstrate the pre-existence of *leucorrhœa*.

“ In the second part, he scrutinises with great rigour, in three distinct chapters, the professional examinations, and begins with that of the 20th June, (the substance of which has been given,) the foundation of the whole decision. The medical examiners describe the contour of the hymen, after having stated that it was *not present* ; they suppose that the *frenulum* forms a part of it, and do not speak of the *carunculæ myrtiformes*—of most acute inflammation *without pain*—swelling, and dilation, and facility of exploring the same parts coterminously—a declaration of rape in an immature female being complete, without rupture of the *frenulum*. This examination, besides being contradictory and irregular, is also, not slightly injurious from its animosity.

“ 1st. Because the examiners take on themselves to say more than was asked of them by the judge.

“ 2d. Because they refer to a single extrinsic cause, the alteration of the sexual organs of the child.

“ 3d. Because they did not at least state the possibility that the discharge of the little girl pre-existed, might have been leucorrhœal, and might have corroded the other parts.

“ The second chapter is occupied with a confutation of the examination of the 17th of July. The medico-jurists, in this new investigation, found nothing but slightly increased diameter in the orifice of the vagina, which now admitted the *thumb* instead of the *finger*. From such an *irrelative* difference they arbitrarily deduce :

“ 1st. The precise *fixation* of the day on which the rape was committed, and determine *thirty days* afterwards, what they were unable to establish eight days after the act.

“ 2d. The diameter of the male organ of the violator, which they say must be that of a person who has arrived at puberty.

“ 3d. The contagious nature of the two little drops found in the urethra of the accused.

“ The third and last chapter of this second part relates to the

third professional examination of the 28th of July, 1822. It is asserted in this, that the inflammation had ceased, and was reduced to a simple irritation; to this they add the pain (which was not present till this time), the constriction of the parts (which, during the inflammation were dilated), and the intolerance of every touch in the parts themselves (which, at the former visits, admitted the finger and thumb with every facility). From these circumstances these examiners conclude, that the discharge from the vagina was *gonorrhœal* \*. They abstained from deciding on the nature of this discharge, at the second examination, we know not from what ill timed delicacy; but as Crespi was accused of rape, the girl having a discharge from the vagina, and the fluid from Crespi being contagious, every one will perceive that the fluid from the girl ought to be equally communicable, because it was that itself which was communicated by Crespi.

"From all these circumstances we are of opinion that the want of the hymen and the variable dilatation of the vagina do not in this case give any proof of rape committed on the immature female. That the hymen was absent does not shew that it was lacerated, in which case *caruncula myrtiformes* ought to exist; of these no mention is made. The vagina, besides not being generally of the same dimensions, does not show itself always dilated in the same degree; thus in the first instance it admitted the index finger, at the second visit it received the thumb, and at the third it would not allow of the slightest touch. Notwithstanding this accusation of rape (although the sufferer was not yet at the age of puberty, and it was violently perpetrated), it was not followed by pain, nor hæmorrhage, nor inability to move; neither by laceration nor bruising, which is equally repugnant to experience and reason †. In regard to the discharge from the vagina, the medico-jurists ought to have sought for its sources, and employed the measures necessary to dis-

\* There are some physicians who think that medico-jurists have no right to give "opinions" in a court of justice, a notion which is incorrect and hastily formed. They say the physician is to give nothing but "facts" to the court, as if the court or jury could decide whether a wound were necessarily or accidentally mortal, or were able to discover whether certain appearances were the result of the use of poisonous substances, or were owing to incidental circumstances. The medico-jurist examines the "facts" solely with the view to make up an "opinion," and though he is called on by the court to relate all the "facts," it is upon his *inferences* therefrom, aided by the inferences of judicious men in similar cases, that the decision of the court is to be formed. If the court and jury were all well qualified professional medico-jurists, then they would need nothing but "*facts*;" in the present condition of things the physician is expected to know how to observe the "facts," in order that he may be able to give an available "*opinion*."—REVIEWER.

† Nihilominus nostro iudicio, turpium magna sine injuria vel partium dilaceratione perpetrari potest, præsertim in puellam debilem, et teneræ ætatis, leucorrhœa ægrotatam; nam omnibus perbene cognitum est feminas hunc morbum patientes genitalia magnopere laxa et hianta habere. Stuprator cujus sunt genitalia parva vel mediocria, lubricando et caute agendo, (tali etiam impubere puella, maximeque in animi deliquium) virgam intromittere potest.

REVIEWER.

over whether it came from the internal or from the external organs. If they had accurately observed the irregular and inverse order with which the symptoms of the undetermined discharge succeeded each other, it would not have been incorrect for them to decide that it could not be *syphilitic* and *communicable*, since the gonorrhœa runs regularly through its stages, and presents no such anomalies. Finally, after having heard from the girl's own mouth, that immediately after the consummation of the act, the discharge made its appearance, they should have had no doubt of its being *leucorrhœa*, because the '*syphilitic gonorrhœa*' is always preceded by the state of *ebullience* (or dormancy). Such is our fixed decision, without shadow of prejudice, animosity, or interest, which, for the sake of truth and the honour of Roman medicine, we have solemnly and unanimously published."

"Signed by twenty-eight of the most distinguished Roman Professors and Physicians.

"In addition to the examination of the fallacies of the accusants, Metaxà has brought forward testimony to prove that the child was of a scrofulous habit, and had been suckled by a woman of exceedingly bad character, and at a very early age had suffered from leucorrhœa. Besides this, he has shewn that the mother of the child had a hatred against the family, if not the person, of the defendant, the essay of Metaxà is well worthy the attentive perusal of all who are anxious to become versed in the important and difficult science of medical jurisprudence, though we believe that in many respects his anxiety to establish his point, has made him give too much importance to some things, and attach too little credit to others."

*Trial and conviction for Murder, and pardon on the plea of insanity.* By Dr. BECK\*.

A case of some interest in Medical Jurisprudence occurred during the last year in New York, the particulars of which we shall briefly detail. They are furnished by a writer whose investigations in forensic medicine are well known to the profession.

"In January 1823, William Kirby, a resident of the county of Lawrence, was indicted for the murder of John Hughes, (a son of his wife by a former marriage) aged four years, and also of his daughter Frances Kirby, aged two years. At the court of oyer and terminer, held in September, 1823, the prisoner was put on his defence, and he pleaded not guilty. It was proved on the trial, (and admitted by the prisoner,) that on the 22d of January 1823, he had drowned the two children in the Oswegatchie, from a bridge leading across that river. The fact, indeed, of the murder, was fully and entirely admitted by the prisoner. The justification of the homicide was *insanity* at the time he committed the act.

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\* New York Medical and Physical Journal.



"To support this defence, one witness, residing at Prestcott (Upper Canada) stated, that the prisoner came to his house about a year before the murder was perpetrated, and worked with him about ten days. During the time that he was at the house of this witness, he said publicly that he was a deserter from the British army, and that he would give himself up at the fort; that he went to the fort, returned in a day or two, and said he was acquitted. Another witness (Henry Hamilton) testified, that he knew the prisoner, and had boarded and worked with him; that the prisoner often complained of a *pain in the head*, and could not eat his meals. He thought him a singular man: he often found him sitting alone in the fields, and he would often stop at work and appear to forget himself, but *it never occurred to the witness that he was crazy*.

"Christian Hill saw the prisoner about a year before the trial, and for three months after that time. Kirby boarded for a month or two at the house of the witness, and when his wife and children arrived he appeared much pleased and very affectionate. They had not been with him more than a week or two when the children were drowned. Previous to the arrival of his family, he expressed great anxiety about them, and said he should never see them unless he *saw them soon*. On an evening, while boarding at witness' house, and during Autumn, Kirby said he was *going to drown himself*. This produced no alarm; but he shortly after left the house without his hat and coat, although the weather was cold, and was absent until near morning. He mentioned, that if he could have succeeded, while out, in procuring some rum, he would have been in eternity.

"The Rev. James Macauley testified that he had visited the prisoner three or four times, in prison: the prisoner's mind appeared unsettled, and, he had sometimes thought, broken and scattered. Dr. Joseph W. Smith was requested by the civil authorities to assist at the examination of the prisoner, to ascertain whether he was insane or not. "He asked the prisoner several questions with that view, but discovered no indications of insanity. The prisoner, however, might be insane and the witness unable to discover it." C. D. Raymond, sheriff of St. Lawrence county, said, that the prisoner had been in his custody since the Winter preceding, and that he never saw any thing indicative of insanity.

"The examination and confession of the prisoner was also produced. In it, he says, 'that he had it in contemplation to destroy the children for about a week past; that the children had given him no offence; that he did it because he thought it better for the children to go into eternity than to ~~stay~~ in this world; that he intended to have destroyed himself with the children, but the thought struck him at the moment that suspicions might rest on his wife, and he determined to stay in order to shield her from any imputations; that he had been in the United States about five years, and for the last six months had been seeking to destroy himself; that he believed he should have been happy, if he had drowned himself

with the children, and that he could have supported the children comfortably.

"The jury were particularly charged on the point of insanity by the presiding judge, but after being out about fifteen minutes, they brought in a verdict of guilty.

"A representation was subsequently made to the governor by the judge, and the district attorney, who prosecuted on the part of the people, concerning the unfortunate convict. This, together with an examination of the testimony, led that officer to the belief that Kirby was insane when he committed the alleged murder, and it was therefore determined to exercise the power of pardon; which, by the constitution, is vested in the executive of the state. 'Believing, however, that it would be dangerous to the community to suffer the convict to go at large,' the governor only postponed the period of execution, for the purpose of obtaining a law, by means of which he could annex to the pardon the condition of perpetual imprisonment.

"On stating the above circumstances to the legislature, the consideration of them was referred to a committee of the senate, and it was from a report made by that body that the facts related above are obtained. It will be perceived that it remained with the legislature to decide on their value as proofs of alienation of mind, and it is almost needless to add, that in a case of this nature a leaning to the side of mercy was readily exhibited. A law was passed complying with the request of the governor, and enabling the keeper of the state prison to receive Kirby into his custody.

"As all the facts on which the above decision was made, are contained in the abstract now given, it will certainly not be deemed improper to advert to the leading features of the case; and in the first instance we may remark, that the proofs drawn from the conversation or actions of Kirby, are very uncertain and inconclusive indications of insanity. The most intelligent witnesses, the clergyman and sheriff observed nothing of this state of mind, while a medical man, who examined the prisoner expressly with a knowledge of the charged insanity, is free to declare, *that he discovered no proofs of it*. We do not hazard, therefore, much in asserting that the plea of insanity was unsupported.

"There remains, however, an important consideration, which, although not expressly mentioned, has doubtless exercised considerable weight in the decision of the subject, and that is, *that the act, a father murdering his children, is of itself a strong proof of the presence of insanity*. In passing such melancholy cases as the present, the mind naturally inquires whether any proof of malice be present, and it has happened that maniacs have suffered as murderers because the chain of testimony was apparently clear with respect to the real or supposed hatred entertained by them against their victims. Here, however, no such suspicion can be indulged: indeed invention is perfectly at fault to assign a cause, and we readily and willingly refer to a disordered mind what would else be a

crime of the deepest and most terrible atrocity. Fanaticism, which is constantly destroying its dearest earthly objects, is thus explained, and indeed can alone be explained with any show of probability in this way. But it must be recollected, that crimes as atrocious as any that the records of insanity can present, have been committed by those whose sanity was undoubted; it therefore becomes a question of the deepest interest as to the indications which are to point out these different states of mind. We know of none except a diligent, enlightened, examination of the conversations and actions of the accused individual; a comparison of these, with the history of his previous life, and a cautious inquiry as to the motives for the crime. Believing that these, in the present case, will not warrant a belief in the insanity of the individual convicted, we are still ready to bestow our approbation on the humane policy which, while it prevents him from doing further injury to the public, enables him to repent in solitude over the commission of his detestable offence."

## IX. MATERIA MEDICA AND CHEMISTRY.

*New French Medicines.*—We resume our extracts from the interesting article in the *Conspectus of Prescriptions* to which we have already been so largely indebted.

### LIQUOR MORPHINÆ ACETATIS.

R. Acetatis morphinæ gr. xvj.

Aquæ distillatæ ℥vj.

Acidi Acetici diluti ℥ij.

Fiat solutio.

*Sedative.*

DUNGLISSON.

### LIQUOR MORPHII CITRATUS.

R. Opii ℥iv. contere in mortario cum.

Acidi citrici crystallizati ℥ij. adde.

Aquæ bullientis Oj.

Macera ad horas quatuor et viginti et cola.

PORTER.

### NARCOTINE.

A chemical principle found in opium, and formerly called the salt of Derosnes, from the discoverer, and sometimes opiane. It is not used medicinally.

### NUCIS VOMICÆ EXTRACTUM RESINOSUM.

Take any quantity of the nux vomica, washed, exhaust it by repeated macerations in spirits of wine, and evaporate slowly to the consistence of an extract. To make a dry extract, dissolve this in water, filter, and evaporate. Dose from one to three grains.

### PILULÆ EXTRACTI NUCIS VOMICÆ.

R. Extracti nucis vomicæ ℥j.

Divide in pilulas No. xxxvi, dosis una ad decem nocte.

*In Palsy.*

MAGENDIE & FOUGUIER.

TINCTURA NUCIS VOMICÆ.

R. Extracti exsiccati nucis vomicæ gr. iij.

Alcoholis, (sp. grav. 837) ℥j.

Solve et in quoque vehiculo sumenda.

Dosis guttæ v. ad xxx.

In Paralysis.

MAGENDIE.

OPIANE see NARCOTINE.

PICROTOXINE.

A chemical principle found in the *cocculus indicus*, by M. Boullay. It is very bitter and inodorous. It combines with acids. It acts, according to Orfila, like camphor, but more actively. Not used medicinally.

PIPERINE.

A peculiar chemical principle discovered in black pepper, by M. Oerstadt. It is somewhat like the resins. M. Meli successfully employed it as a febrifuge, and says it is more certain than sulphate of quinine, and being more active, must be given in smaller doses.

QUININE.

The most celebrated of all the new vegetable alkalies, and procured from the red Peruvian bark, *cinchona oblongifolia*, as the cinchonine is from the grey bark. To procure it, boil the bark in alcohol till it loses its bitter taste; evaporate to dryness; dissolve this extract in boiling water, strongly acidulated with hydro-chloric acid; add magnesia in excess, which, after a few minutes boiling, will fix the red matter and clear the liquor; when cold, filter and wash the precipitate with cold water; dry it on a stove, digest in boiling alcohol till all the bitter principle is separated; mix the alcoholic liquors, and the quinine will separate as it cools. Quinine is white and very bitter. Its dose is from five to ten grains.

VINUM QUININÆ.

R. Sulphatis quininæ gr. xij.

Vini Maderæ boni ℥ijss.

Fiat solutio dosis unciæ quatuor ad quatuor et viginti per diem.

In Intermittents and Debility.

MAGENDIE.

TINCTURA QUININÆ.

R. Sulphatis quininæ gr. vij.

Alcoholis (sp. gr. 847.) ℥j.

Fiat tinctura, dosis ℥ij. ad 3vj.

In Intermittents and Debility.

MAGENDIE.

RHUBARBARINE.

A new chemical principle discovered by M. Pfaff, in the common rhubarb of Europe. It is solid, dark brown, opaque, of a disagreeable odour, and nauseously bitter taste. Nitric acid converts it into oxalic acid. It is deliquescent, and very soluble in water, alcohol and ether. It seems to be the active principle of rhubarb.

SCILLITINE.

A new vegetable principle discovered by M. Vogel, in the *Scilla*

maritima. It is white brittle, and transparent, without smell, and of a bitter taste. It is deliquescent, and very soluble. It excites vomiting, diarrhoea, and acts diuretically, like squills.

#### SOLANINE.

An alkali lately discovered by M. Desfosses, in the *solanum nigrum*, and *solanum dulcamara*, or bitter-sweet. It exists most abundantly in the ripe berries in form of a malate. When pure, it is a white pearly powder, inodorous, and slightly bitter and nauseous. The dose is not yet determined.

#### STRYCHNINE.

An alkali discovered by MM. Pelletier and Caventou, in the *strychnos ignatii*, the *S. nux-vomica*, and the *S. colubrina*. It is this principle that the Java poison owes its power. Dose from one twelfth to one-eighth of a grain.

#### PILULÆ STRYCHNINÆ.

R. *Strychninæ purissimæ* gr. ij.

*Conservæ rosarum* ʒss.

Misce accurate et fiant pilulæ No. 24. æquissimæ; dosis una per nocte.

*In Paralysis.*

MAGENDIE.

#### TINCTURA STRYCHNINÆ.

R. *Strychninæ purissimæ* gr. iij.

*Alcoholis*, (sp. grav. 837.) ʒj.

Solve; dosis gutt. sex ad quatuor et viginti in quovis vehiculo.

*In Paralysis.*

MAGENDIE.

### X. MISCELLANEOUS.

#### *Bye-Law of the College of Surgeons.*

Our readers will learn with pain, though not with surprise, that the obnoxious bye-law of the College of Surgeons, which virtually prevents the members from lecturing or teaching, by refusing their certificates, is still in full operation; for though Messrs. Sleigh, Dermott, and one or two more of the younger lecturers, have been exempted *cum gratia*, we are informed that it is determined to grant no more of these indulgences, and that they have been actually refused to those who have lately applied. The legality of this most obnoxious bye-law is more than questionable; and we think that the members who are aggrieved ought to lose no time in bringing the measure before Parliament, that their rights may be protected against the monopoly of the individuals in whose hands the management of the affairs of the College has been (in this case very improperly) placed.

ANDERSON'S  
QUARTERLY JOURNAL  
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**ART. I.** *Collections from the unpublished Medical Writings of the late CALEB HILLIER PARRY, M.D. &c. &c. Royal 8vo, pp. 279, London, 1825.*

THAT the late Dr. Parry was a man of no ordinary ability, and that he made considerable improvements in practice, particularly in the Treatment of Diseases, called Nervous, we imagine there are few men so fool-hardy as to deny.

With regard to his theoretical opinions we speak with less confidence. They have frequently been controverted; and it is in their defence that the author has come forward with the present volume, and sent it into the world as the forerunner of his father's manuscript writings, which are now in the course of publication. But surely, his father's defence might have been comprized in a much smaller compass; for instance, in a preface to the first part of the Collections.

The peculiarities of Dr. Parry's practice and opinions, and their having, in many instances, been appropriated by others, made his friends desirous that he would himself publish some account of them. The chief of these relate to Nervous Disorders, and to Inflammatory Dropsy.

Dr. Parry was prevented, by an incurable illness, from finishing his work upon general pathology; but he left directions with his son for finishing the remainder. His son, however, with great modesty, thinks himself inadequate to the task, and wishes that some abler person had undertaken it.

"In looking," he says, "at the materials which have been left to  
VOL. II.                      Q

his care and disposal, he finds himself in the situation of one who is suddenly placed amid the half-finished specimens, the friezes, capitals, and embryo columns of some master architect, which, united by his hand and under his guiding intellect, would hereafter have grown into perfect forms, and become arranged into some noble structure, sacred and devoted to his own perpetual fame. In the absence of this directing genius, they remain either half-shapen masses, indicative of beauty and energy ; or, set together in combinations foreign to the original design, while their separate beauty ceases to be conspicuous, they fail also to impart strength and dignity to the elevation, of which they now constitute an incongruous part."

He then proceeds to a general defence of his father's works, observing, that every thing has been said by his adversaries, that can fairly be urged against them. He is for the most part pleased with the Reviewers ; but some of them, particularly a Northern one, he asserts, have substituted declamation for argument, and have in some instances not understood the doctrines they were criticising.

He then considers the objections, and enumerates them in the following passage :—

" In adverting, briefly, to some of the objections which have been advanced, it is proposed to separate them into two principal divisions, including under the first such as are of a general nature, and under the second those which have a more specific and particular allusion. Among the first may be placed those circumstances connected with the subjects of his inquiries, which Dr. Parry is stated to have altogether neglected and omitted : such are his supposed disregard of the nervous, the glandular, and absorbent systems ; of the venous apparatus of the brain ; of the quality of the blood ; the objections to the order and arrangement of his matter, and his frequent repetitions ; his supposed error in not comprehending all his principles in a single work ; his too great fondness for generalization and system ; the extreme simplicity of his doctrines ; his adoption of a Universal Cause, and a common origin of diseases ; his reasoning upon slight analogies, and insufficient data ; his adoption of many points, which are too hypothetical, or have not the merit of novelty ; his admission of the same causes in complaints differing very much in their nature, &c. Under the second head may be placed a numerous list of objections derived from his particular doctrines of Inflammation, of Tonicity, of the want of an independent arterial power ; from his opinion that inflammation increases the secretions, his praise of Gall and Spurzheim, his denial of diminished absorption as a cause of Dropsy ; his conjectures as to the possible nature of Scurvy ; his omission of certain sympathetic cases of Epilepsy, and of Hæmorrhage from the Lungs and Uterus, &c.

These, and others, form certainly a formidable list ; but they are by no means substantiated ; for many of them are founded in misapprehension.

The arrangement of the Elements, the Editor informs us, has been objected to, in consequence of an enlarged view not having been taken of the whole design and of the intimate connection of its parts. He also denies that Dr. Parry ascribed all diseases to a common origin ; every thing he advanced on this subject being the result of experience, and not of a favourite theory. It is ridiculous, the Editor thinks, in the Northern Critic to put Dr. P.'s opinion, that the blood is a concurrent cause in the production of disease, on a footing with the notion of Hippocrates and Galen ; blood being a tangible and visible substance, and not a fanciful essence.

The contradictions, and mis-statements of the Reviewers, are next pointed out, and, in our opinion, clearly proved against them ; but for an account of these, we must refer to the work itself.

We are informed that the MS. collections of Dr. Parry are extremely numerous.

"Notwithstanding," says the Editor, "a very extensive practice, which for many years occupied twelve or fourteen hours every day ; notwithstanding the constant variety of cases which daily occupied his attention, and induced a continued mental anxiety, he constantly persevered in the practice of noting down, on foot, in his carriage, and even in his bed. His daily lists are accompanied by detached remarks, or connected cases, and his chests are filled with collections, of a miscellaneous kind, chiefly in an unconnected form."

Many of these documents are as early as 1776 ; and the Editor has been uncertain whether he should go so far back with his selection, as to that period.

"Every fragment," he says, "has been considered of more or less value, which has proceeded from an experience so extensive, watched over by a judgment so powerful and so correct, and which was so carefully assisted by the habit of immediately noting the peculiarities and accordances of the numerous cases which were daily presented to the Author's observation. Where every thing is original, and derived from such a source, there cannot, it is imagined, be a question as to the importance of the matter, whether it now appear, for the first time, as a novelty, or confirm only the prior experience and remarks of other practitioners.

It is, however, also readily acknowledged, that, wherever dates could be obtained, one ground for selection has been the support of that claim to priority of observation, which has so often been lost by the delays connected with Dr. Parry's professional habits."

The Selection will contain these facts, and observations con-



## Dr. Parry's Posthumous Works.

ative of information which has already been made public, and those which do not occur in any of Dr. Parry's printed works. It will, also, include every thing which relates to Dr. Parry's Treatment of Diseases, and likewise a considerable number of Miscellaneous Papers, which could not easily be classed under separate heads.

With regard to the whole work, the Editor thus expresses himself at the conclusion of his preface:—

"A perfect system was never contemplated, and a more complete arrangement was prevented by the decree, which arrested the Author in his mid career of industry and observation. The Architect is no more! A few years would have consolidated into a more noble structure the fragments which are impressed with his feelings, and with his energy. These scattered masses are collected together, and if they do not form a monument entirely worthy of his name, they will still, it is hoped, constitute a heaped memorial of some beauty, and of so much durability, as may preserve even his human existence from a mercile and enduring oblivion."

Our author's first essay is on Irritability. This essay we have read oftener than once, but we cannot say with truth, that we have risen from the perusal much wiser than before; though the author declares that he had done his best, to disentangle the subject from the errors of irregular deduction, or inaccurate observation. Dr. Parry's great object is to prove, in support of his father's doctrines, that the arteries of warm-blooded animals though it has been proved that they have muscular fibres, destitute of irritability, and that the blood is sent through them entirely by the action of the heart, assisted by their own tone, and mechanical elasticity.

"The irritability of the arteries of warm-blooded animals, Dr. Parry, "has lately been maintained on three distinct grounds. First, their contraction under exposure, and the irritation from the circumstances of the experiment: Secondly, an impulsion, or contraction and dilatation, which appears on application of chemical and mechanical stimuli: Thirdly, the grade motion, which is manifest when the circulation is interrupted by a ligature, or by other causes of obstruction."

The experiments made, and they have been made with care, to prove the irritability of arteries, are so various and contradictory, that it is not safe to found anything upon them; sometimes contraction and sometimes dilatation, neither the one nor the other, and sometimes a tremulous or vermicular motion taking place. Indeed they have been no respect to elucidate the real action of the vessels, have been all adduced as manifesting the effects of power, irritability.

"Nothing," says Dr. Parry, "can be more variable as to effects, more unsatisfactory as to proof, or less conclusive as to the powers of the vessels, or their real influence in the circulation, than these experiments. If, indeed, any local change which may occur in vessels from the application of a stimulus warrant the adoption of this peculiar power, Irritability must be otherwise defined than a contraction on stimulus. If the same stimulus produced at one time contraction, & another dilatation, as happens in these experiments; if, 'in one instance, the contraction occasioned by the liquor ammoniæ was', and in other examples it produced an 'opposite effect,' it is not to be expected that we should concede the point at issue, and agree that the latter effect is the consequence of Irritability suddenly destroyed. Under nearly the same circumstances the effects should not be the reverse, if the relation of cause and effect were that through which the changes are effected. And how does this diversity of effect afford any analogical argument in favour of an identical power? There is a peculiar action in the heart, in the intestines, bladder, muscles. Does the same stimulus in these produce such opposite effects? Is there any doubt as to their appropriate action when stimuli are applied? or would it not be just as fair to attribute any varieties in their action to another faculty than that of Irritability, as to ascribe this property to vessels which exhibit such irregular and anomalous motions? May not the tortuous and vermicular movements of the intestines, for instance, be ranged, with as much probability, under a class distinct from their power of contraction on a stimulus? or, may not their structure, essentially differing from that of the arteries, for the purposes of a peculiar function, admit a complex effect of Irritability, without sanctioning any analogy from mere external similitude between their action and that supposed to belong to the arteries? But even this similitude fails altogether. What nice observer could commit himself by a comparison of the vermicular arterial movements with those of the intestines? The diversity of their conditions is as great as that of the relations and objects of the parts in question; and perhaps, in the whole inquiry, no instance can be supplied as clearly distinctive of the nature and functions of parts, as the difference in the movements and purposes of the arterial and intestinal tubes."

When a slight permanent contraction has been produced, our author is disposed to attribute it to tone or tonicity, a power which is capable of permanently closing, or even obliterating, the tubes of an artery. This applies to a contraction occasioned by a moderate stimulus, and not by nitric acid, which will excite contraction chemically in parts not endowed with irritability. But in irritable parts the effect is produced instantaneously, whereas in arteries hours will elapse before the supposed influence is felt.

"I know," says the author, "no more beautiful or more con-

vincing proof of the very low degree, or entire absence, of irritable contractility in the arteries, than the difference which may be seen in the effects of touching with the point of a knife a piece of the œsophagus, and a corresponding portion of the aorta of a rabbit. The former is immediately put into motion, the latter remains perfectly quiescent. It happened accidentally to the present author thus to touch a piece of the œsophagus, which he believed to be a section of the aorta. The immediate and palpable effect astonished those who were witnesses of the experiment, and the doctrine of arterial irritability seemed to be completely established. Nothing could, however, be a more decided refutation of it, than the discovery of the truth, and the immediate comparative trial which was instituted with the aorta itself. In all the experiments adduced, the alternative effect on the contained blood is entirely kept out of view, and the question, in itself and in its analogical relations most important, is omitted, whether, in the artery emptied of its blood, such effects or such contraction can be produced, as, under similar circumstances, are witnessed in other irritable parts? This would, in fact, be the true test of resemblance with a power peculiar to these parts of the living animal body."

*Increased pulsation* is the next object of Dr. Parry's attention. This is understood to be an increased contraction and dilatation of the vascular tunics; but this pulsation neither Dr. Parry, nor any of those who assisted in his experiments, ever discovered in any circumstances. That such an effect, however, may take place in certain vessels, particularly those near the heart, and similar in structure to that organ, our author does not attempt altogether to deny. In short, he thinks that on extraordinary occasions, an artery may assume the power peculiar to the heart; which is saying that irritability can be implanted in an organ which did not previously possess it. Dr. Parry, however, allows that the artery in consequence of its tonicity exhibits a variety of motions, which may be mistaken for contraction and dilatation.

"The aorta of a full grown buck rabbit was, to a considerable extent, exposed, by two intelligent surgeons. Not the slightest appearance of contraction and dilatation, nor even of motion, whether from respiration, or the increased struggles of the animal, was discoverable. The vessel was touched with liquor ammonia, and after a few minutes, during which no motion of any kind had appeared, a palpable dilatation occurred in the part which had been touched. The part, an inch in length, which was nearer the heart, at first remained as before, but seemed gradually to suffer from the effects of exposure, so as at length to become, in its whole length, somewhat contracted. During several successive examinations, and applications of ammonia, no movement was visible, except in connexion with impulse, or altered position, or in consequence of some locomotion, or the motion of neighbouring parts.

The line of light on the artery remained an unchanged and conspicuous measure of position. No friction, not amounting to pressure, produced any effect. It was very clear to those present, that there was neither local nor general contraction, nor dilatation."

"Is," says our author, "the whole set of arterial tubes dilated at the same moment, and contracted at once from the heart to the capillaries." In our opinion, this question must either be answered in the affirmative, or the irritability of arteries must be given up; for we cannot believe one part of an artery to be dilated, while the parts in its vicinity are contracted.

The *retrograde motion of the blood*, is the third ground on which the irritability of arteries is founded. This retrograde motion, according to our author, is occasioned by tonicity. This is evidently the living contractile power of Haller, which that distinguished physiologist had proved by a variety of experiments to exist in the coats of arteries, and independently of the heart, long before Dr. Parry had ever thought on the subject. We refer to his *Elementa Physiologiæ*, tom. 1. p. 70-2.

Those who have assigned irritability to the arteries in general, have given a higher degree of it to the capillaries, and have attempted to confirm their opinion by experiments.

"But it unfortunately happens," says our author, "that, in the experiments, so clear a distinction and separation of the vessels is not made, as the precise nature of the subject seems to require. It is, to say the least of it, difficult to determine the exact amount of effect in each order, where arteries, veins, and capillaries are all equally implicated, and alike affected by the exciting causes."

After narrating some experiments, the author observes:—

"Admitting the occasional effect of increased velocity on the application of some powers, both sedative and stimulating, we may inquire, whether the irritability of the vessels is the cause of this really uncertain appearance. Independently of the common alternative in the modification of the heart's action, or the altered condition of the larger vessels, I cannot help ascribing much that may not be explained by the tonic or elastic powers of the minute vessels, to changes in the blood itself, so particularly manifest under the circumstances which accompany the phenomenon in question. While no minuteness of examination, with or without the lens, has enabled various observers to detect the supposed alteration in the vascular tunics, the changes in the blood itself, under the influence of stimuli, have escaped the observation of no single experimentalist. It is, certainly, true, that the share which is primarily to be allowed to the admitted inherent powers and affections of the vessels, and that which is to be placed to the account of changes in the state of the fluids themselves, has never been accurately distinguished, and constitutes the great difficulty of the question."

The experiments of those who have adopted a different opinion prove quite the contrary, if we may give credit to our author; but the direct proof of this will probably for ever baffle the researches of man; and in so far as the capillaries are concerned, the Parrys and their antagonists may continue to affirm, and to deny to the end of time.

The remainder of the Essay is employed in considering the opinions of Hales, Whytt, Haller, Bichât, Filici, and Charles Bell, particularly the latter, whose defence of arterial irritability our author has criticised almost with acrimony. Mr. Bell's opinion, also, that tortuous arteries tend to increase instead of retarding the velocity of the circulation seems to have given him great umbrage, and is resisted with a proportionate degree of energy. But he thinks that increased action is not inconsistent with retardation in tortuous vessels.

"In advanced life," he observes, "when partial and general diminution of activity occurs, the vessels universally become more tortuous; the retarded circulation thus probably allowing a greater facility for the slower functions of secretion and nutrition, and preventing, in vital parts, the dangerous effects of casually accelerated circulation, in vessels less capable of resisting the usual *vis à tergo*, and the injuries connected with a less regular impulse. We may, indeed, farther remark on this head, that where, from structure, or the purposes of growth, a larger amount and greater force of blood are necessarily determined to parts intimately connected with the life of the system, no wiser or more suitable provision can be imagined, than such a means of retardation against the injuries, which, in this, as well probably as in the former cases, must occur from excessive momentum, arising from increase of velocity, conjoined with the admitted increase of amount."

To detail all our author's remarks on this subject would be but to enumerate what most of our readers already know—but we think it right to give one more extract, though several parts of it have been already touched upon.

"It has already been observed," he says, "that no process of irritability, with which we are acquainted, will produce the growth of parts; nor of itself, as the sole manifestation of vital power, occasion this local variety and change, in seats predestined to particular local functions; though, in some cases, it may be the intermediate process between the primary power and the effect produced, in the business of secretion and growth. So impossible, however, is it to assent to the proposition, that the arteries possess the chief power in circulating the blood through the corporeal system, and that the heart is rather the regulator, than the prime and efficient cause, of the circulation; that, from a consideration of all the circumstances, it is necessary to adopt the very opposite conclusion. The arteries seem to possess, if any, the

regulating power; and the heart to be the prime and efficient cause of motion.

“When, as we learn from comparative anatomy, the heart of the chick is hard and firm, and pulsating, while the vessels are in a completely soft and yielding state, ‘*cum summa mollitie arteriolarum.*’ When the punctum saliens exists, and is discernible, at a period before the sensible development of the vascular system; when, in the human frame, we see that the heart alone does actually give motion to the whole mass of the blood, in cases of recovery from fainting and drowning; when, in diseased hearts, we observe the great disturbance which occurs in the circulation, and the suspension of the blood’s motion arising from causes acting directly on the heart; when, in the larger number of animals, the aorta and vascular system are in direct connection with the heart, the nature of whose action is a source of immense, and hitherto uncalculated, force, aided frequently by the powerful impetus given to the blood’s current, by the auxiliary power of gravitation; when we see the lungs not placed in juxtaposition with the whole heart, but only intermediately situated between the two hearts, of which one, receiving blood endowed with more vital and stimulating qualities, is destined entirely to its circulation; when we see, that under long enduring and most extensive diseases of the vascular system, circulation continues without any material difficulty, while, as Bichat shews, such a disease, or disposition to disease, occurs universally in these textures at certain periods of life; when we attend to these and other arguments, and consider the feebleness of the proofs adduced on the opposite side of the question, we are irresistibly led to believe, that the arteries have a comparatively inconsiderable function, as agents in the propulsive motion of their contained blood.

“On the whole, there is no evidence sufficiently decisive to authorise the conclusion, that the arterial and capillary powers are identical with the irritability of other parts. If contraction, on the application of a stimulus, seems, according to some experiments, to belong to them, it is still more clear that they will, under particular states of excitement, dilate, and, according to the opinion of some enquirers, undergo certain tortuous and vermicular, or other anomalous, movements. It is very evident, as has before been more than once observed, that the arteries possess a high degree of contractility. They possess also, in a considerable degree, the power of dilatation. This power of contraction differs, however, so far from any known effect of irritability, as, under particular circumstances, to produce the permanent effect of a completely impervious condition of the tube; and that power of dilatation, in various instances of continued impulse, frequently from increased action of the heart, induces likewise a permanently enlarged calibre of the vessel, giving occasion, under certain conditions of pressure and obstruction, to the appearance of pulsation, and the phenomena supposed to be indicative of action increased.”

At the end of the essay on Irritability, we think it the fittest  
VOL. II. R

place to introduce a short notice of the tonicity of Dr. Parry, as given by his son.

"The vessels, then, in every part of the system, are endowed with a vital power of contractility, which has been denominated, by Dr. Parry, Tonicity; of which the common condition is a mean state of contraction, capable of increase or diminution under the different circumstances in which the animal body is placed, in its relation to external or internal causes. They are also endowed with the mechanical power of elasticity, a combination which distinguishes them from most other composite parts of the body, and which is rendered necessary by the complex and varying functions they are called to perform. According to the evidence we possess, the capillaries, or smaller series of sanguiferous vessels, do not possess those powers in a higher degree than the rest; though, for certain specific functions, which distinguish them from other parts of the vascular system, they are probably endowed with powers, in regard to the circulation, somewhat different in their nature from that of the other vessels, whether, according to a recently revived opinion, that difference consists in attraction or affinity for the blood, or in some indefinable relation between the contained fluid and the containing tunics. That irritability alone is insufficient for the specific purposes to which these more minute vessels are destined, clear, from a review of the peculiar effects of this power in all the seats where it exists. In all these seats expulsion alone seems to be the object of its agency. With the exception of that structure which composes the heart, and which seems adapted to an active dilatation, even the function of circulation could not be effected by the process under consideration. In the œsophagus, stomach, intestines, bladder, an expulsive contraction takes place without any corresponding dilatation, till this condition is assumed as a state of rest, and as a return to a state of inaction. But to class under this head alone all the important business of the capillary system, even if we confine ourselves to the transmission of the modified blood, appears to be far too great a limitation of the powers of these vessels."

We now come to the second essay, which is on Inflammation. In this essay we cannot say that we have found our author's ideas clearer than in his former one. Enlargement and dilatation of the capillary or smaller series of vessels, which are evidently concomitants of inflammation, he attributes to a change in the blood, and not to the loss of a power, (Irritability) which, as we have seen, Dr. Parry will not allow to exist in arteries.

"We are, indeed," he says, "much more inclined to attribute the increased capacity of the vessels in these cases to an increased volume and altered constitution of the contained fluid, than the increased volume and visible changes in the blood to any modification of the vital power, similar to that which is expressed by the term Debility. While we necessarily exclude this condition under the view which its advocates have adopted, it may also admit a question, whether, under

our own, this particular term could safely be employed? and whether, though from increased volume, by whatever causes produced, the vessel is less able to perform its functions, and therefore may sustain some relative loss of power, so positive a term would not be incorrectly applied? We might indeed, by the same process of reasoning ascribe debility to a strong man, whose arms were held by one stronger than himself, as apply such a condition to the vessels, whose inability has a reference only to the excess, or altered quality, of the contained blood. Under this view, the unqualified term Debility conveys an inaccurate and deceptive notion; as, the moment the blood resolves itself, if such a fact ever occur, the original power is resumed, unless by the possible continuance of interrupted action, and forced distention, such natural power be destroyed, or some change take place in the organization of the part itself. This opinion is directly the reverse of that maintained by Dr. W. Philip. It may, perhaps, be found more correct, more consonant with facts and appearances, and more explanatory of the phenomena, than that which may strictly be called the doctrine of Debility."

But under a continuance of certain causes, debility, he admits, whether of tonic or irritable properties, may ultimately supervene. Our author is next at great pains to show the absurdities of some part of the opinions of Dr. Wilson Philip, and Dr. Hastings, that inflammation depends on debility of the capillaries and increased action of the arterial trunks.

"Admitting, however," he observes, "an entire obstruction in the capillary system, from whatever cause this may arise, increased momentum will occur in the part immediately preceding this seat of disease, and produce dilatation from accumulation, and a corresponding or consequent tonic exertion of the vascular trunks, thus giving rise to the symptom of throbbing, a pseudo-alternating state of contraction and dilatation. The symptom, then, is neither increased action, nor diminished action or debility, but the increased momentum of Dr. Parry; and without this condition, it does not appear that the state of active inflammation can exist."

In considering the swelling and enlargement in an inflamed part, the author has made the following remarks, which have the merit of being intelligible.

"Whatever may be the nature or effect of increased action, a stimulus does not always necessarily either contract the arteries, or act by inducing debility. Its early and immediate effect is to produce local fulness, in numberless cases where there is not the slightest reason to suspect obstruction, or any particular influence on the capillaries. If we empty the vessels at the back of the hand by holding it up, and thus occasion their usual contraction on the reduced amount of blood, we can immediately cause them to become turgid with blood, even against gravity, by bringing the hand, in the same posture, to the



fire. Will it be said, this is the stage of excitement? It is an effect, then, wholly opposed to the principles advanced with regard to the nature of this condition, and its connection with a contracted state. Will it be said, that it is the stage of debility? Here is no evidence of stagnation of the blood, or of an approach to stagnation. In this instance, we have dilatation or swelling, with excitement, and without debility, and in it we have no proof that any circulation, but that of the larger vessels, is implicated. Will it be said, that this is not inflammation? The same condition may, however, be continued, till a permanent state of inflammation is induced; and the swelling will not be the less palpable in the larger vessels, whatever may take place in the capillary series. But if this be not inflammation, it is clear, that the symptom of swelling, as a constituent of this state, need not proceed from debility—its assigned cause. To vital or mechanical distention of the vessels, to changes induced in the blood itself in the early stages, and to many other causes, as the disease advances, we may safely ascribe the symptom of palpable local enlargement, without an reference to the assumed state of debility in the vessels, as the sole unparamount source from whence the subsequent phenomena are derived.

Neither will he allow that the redness of an inflamed part has any connection with debility; but rather with changes in the blood, with error loci, with an unusual aggregation of red globules in certain minute vessels; or in short with any thing rather than debility. And if there *really* is increased temperature in an inflamed part, he would assign it not to debility of the capillaries, but to increased momentum of the blood, relative or positive (the doctrine of his father) depending on changes, that have taken place in that fluid. But as our author has repeatedly accused the Reviewers and others of mistaking or misrepresenting his father's doctrines, we shall give the doctrine of inflammation in his own words.

"According to Dr. Parry," he says, "the symptoms of inflammation are durable preternatural fulness, and consequent distention, of the vessels, increased redness, heat, and tenderness. He endeavours to prove, from the temperament and age usually affected, from causes producing increased impetus, from local inflammation actually produced by such causes, from the greater quantity of blood, and a velocity as great in parts which are inflamed, and from the jets of blood from the cephalic vein under gouty inflammation of the wrist, that, in *certain stages* of inflammation, an excessive momentum of blood exists in the vessels of inflamed parts, which must be considered an indispensable cause of what we see in inflammation. He considers, that the immediate cause of local predisposition is a proneness to dilatation in the vessels of the part liable to such maladies. He is so far from asserting that the morbid dilatation is the mere mechanical effect of *new* increased impetus, that, on the contrary, he endeavours to shew various places, that the fulness, constituting part of the local mor

tum, often accompanies a dilatation of vessels, arising from causes acting merely on their own tonicity, without any increase of the vis à tergo from the heart; and even that the increased action of the heart often follows, instead of preceding, the excessive local dilatation: thus, that, though inflammation may arise from general increased impetus, it may sometimes occur without it." He considers the capillary system, of all the different textures, to be the one primarily affected in this morbid change. Dr. Parry farther shews, that different changes occur in different periods of inflammatory disease, so that the phenomena may at one time be essentially different from those previously existing; thus, in a phlegmon, tonicity of the capillaries might be lost, after undue dilatation. In speaking of excessive momentum in inflammation, he refers to what may properly be called the acute stage of the malady, which is essential to the production of all the subsequent phenomena."

The effect of velocity increased is admitted by the Parryists, but they do not connect it with contraction of the arteries from the application of stimuli.

"The cause" he says, "of that increased velocity we may be disposed still to place among the mysteries of the animal system, and, at all events, to attach a much greater importance to that highly vital fluid, the blood, than to the vessel which is the mere organ of its conveyance. Those who advocate the opposite doctrine, imply and admit, in fact, no vital action in the blood, which is not connected with, and dependent on, its containing vehicle."

Can inflammation occur in cases where there has been no increase of momentum? An approach to a sudden suspension of motion, and an entire change in the colour and consistence of the blood may be induced by violent stimuli or disintegrating processes. But such a state Dr. Parry does not include under the head of inflammation; though it may be admitted as a chronic form of the disease. It is probably an affection of the capillaries alone, and not of the arteries and veins as in other cases.

After having at some length examined the opinions of those authors, who differ from his father, the author concludes the subject in the following words:—

"The preceding remarks do not profess to unfold the mysteries either of the circulation, or of its deranged condition, inflammation. It has been attempted to reconcile some of the opinions of Dr. Parry with the phenomena of both states, as well by actual experiment, as by a consideration of the objections, practical as well as speculative, of the writers who take a different view of the subject. The author is neither insensible to the numerous weak points which his defence presents, nor of the difficulties which still, in this abstruse matter, remain to be surmounted, both in determining the precise relation of causes, and in the accurate observation and arrangement of the facts themselves."

The author now proceeds to relate a series of experiments in favour of his views, and which seem to prove that the coats of vessels have no influence in the production of the states of circulation and inflammation. These we shall notice in so far as they are interesting.

"He has seen two streams of blood within the same portion of a vessel, one of which, at the same instant, flowed backwards, while the other flowed forwards: a fact, which appears to him, in the cold-blooded animals from which all the important inferences are drawn, entirely subversive of the doctrine of vascular influence, in the common process of circulation. The fact here mentioned might perhaps be more properly described, as a single stream divided into two parts, which circulate in opposite directions.

"According to an observation made during the progress of experiment, one part of an artery has been occupied by red, homogeneous stagnating blood, and another side of the same vessel has contained the usual natural blood in full circulation. This fact seems incompatible with debility of the vessels, as a cause of the change in the blood.

Although all the vessels of a part have been exposed to the cause (over-excitement) which is supposed to produce debility, only a few of them contained blood in an inflamed state; or the author therefore concludes, that the change was on the blood and not on the vessels.—In general "while the arteries and veins are transmitting or moving their fluids, the smaller vessels are a blank and inert mass."—Increase of velocity is not attended with contraction of the vessels but oftener with dilatation.—Blood effused possessed every variety of motion, even against gravity.—In ossified arteries the blood is not changed, and continues to circulate for years without any difference of quality.—As an oscillatory motion can take place in arteries, "much dilated" it affords no proof of their irritability or contractility.—In the capillaries there is no action, the blood flowing through them in a uniform stream.

"Occasionally, the blood flowing into the neighbourhood of obstructed vessels does accumulate for a considerable length of time, and, without any motion of retrogression, becomes stationary."

When the influence of the heart on the circulation is interrupted, a sudden and entire suspension of motion frequently takes place, to be renewed not by local stimuli, but by a restoration of the connection with the heart.

The following subjects, our author informs us, still seem to demand a more particular examination than they have hitherto met with.

*First*, The cause of increased velocity in the circulation, independent of contraction of the vessel.

*Secondly*, An account of the exact changes in the blood, under the causes inducing the inflammatory conditions.

*Thirdly*, The facts of inflammation suddenly induced, without disorganization, and without evidence of increased momentum in any part of the series.

*Fourthly*, The facts with regard to dilatation, whether mechanically or otherwise induced, and of accelerated circulation, as inducing morbid changes in the blood, analogous to, or identical with, those of inflammation.

*Fifthly*, A more exact distinction between the faculties of irritability and of tonicity."

We have room only to extract our author's remarks on the 5th of these heads; on the difference in the faculties of Irritability and Tonicity:—

"Irritability, not excited, accumulates.

"Tonicity not called forth is lost.

"Irritability survives the life of other parts.

"Tonicity does not so survive.

"Irritability acts under stimulus alone.

"The effects of Tonicity are most manifest under the absence of stimulus.

"The highest degree of Irritability is said to be attended with alternating relaxation.

"The highest degree of Tonicity is permanent contraction. They equally differ in other degrees; as Irritability can never permanently contract.

"Irritability is independent of the brain, though it may be influenced through it, and by other stimuli.

"Tonicity seems derived from the brain, and is not acted upon by stimuli.

"Irritability has no necessary connection, in its seats, with the elastic power.

"Tonicity and Elasticity are generally united for their destined purposes in the animal economy.

"The actions of Irritability, according to certain recent experiments, are often not manifested in one or two hours, under the influence of stimuli, which are said ultimately to affect them.

"The action of Tonicity is immediate. Remove the blood, or render it unnecessary, contraction immediately follows.

"Irritability has no mean state. It exists only under excitement.

"Tonicity has a mean state, and is manifested under the absence of excitement."

We now come to the essay on determination of blood, in which our author vindicates Dr. Parry, and we think successfully, from having assigned increased momentum as the proximate cause of all disease.

# Dr. Parry's Posthumous Works.

"He, (Dr. Parry) considered a disordered state of the whole or some part of the sanguiferous system to be the most obvious of all the deviations from health, and, in numerous instances, the only tangible part in the great and connected chain of causation. He has supplied us with a list of those disorders, in which this symptom appears to be predominant; and, what is of more importance, a valuable or necessary guide for our practice. It is his opinion, that exclusively of those maladies which arise from the influence of mechanical causes, or from infectious or other miasmata, these are the principal affections to which the animal frame is liable."

The most formidable, and at the same time the most urbane, of the antagonists of Dr. Parry, is Dr. Pring, from whose work we have a long extract which contains a summary of the late Dr. Parry's doctrines, but which in several of its positions is here opposed with some keenness.

"It is scarcely worth while minutely to inquire into the justice of the observation, that the doctrine which assigns the cause of nervous disorders to determination of blood is devoid of novelty; but we might properly ask, for the sake of information, where it has been shown, that nearly all the modifications of the disorders, usually so called, 'originate in excessive momentum of blood in the vessels of the head;' or where a practice, regulated by such a view, had been previously adopted?"

Dr. Parry, contrary to what his antagonist asserts, has himself shown that all nervous disorders do not rise from such a cause. Neither does he assign determination of blood in the seats of diseases as their common parent; nor did he invent the term *cure of diseases by conversion*.

An inspection after death may show no determination of blood to the seats of disease.

"It may, however, be permitted me to ask, whether the state, if life has ceased, necessarily coincides with that which existed during life; or whether, under no possible supposition, the ceasing of action may occasion the cessation or modification of conditions dependent on such vital action? Farther, whether, under no equal supposition, the state of local fulness may not have been replaced, and this previous symptom have been entirely superseded, by an affection which induced a fatal disease? Dr. Parry has, upon these grounds, endeavoured to shew, both that effusions, where existed, remove the previously diseased state, and that spasmodic local fulness is relieved. Although, therefore, the severest have existed during life, without any evidence being afforded of a preternatural determination after death, that such a state was not, in any respect, followed, that such a state was not preceded the described effects. It might, perhaps, be a

other hand, that, in proportion to the severity of the symptoms, would the absence of this appearance be more decided, and that preternatural fulness of vessels should only be manifest in cases where this salutary effect does not take place, as it occurs in *Hysteria*, *Epilepsy*, *Tetanus*, and other similar disorders."

But, after all, Dr. Parry only makes excessive impetus or momentum of blood, acting on the medullary substance of the brain and nervous system, a concurrent cause; and excessive momentum may exist without local excess of blood. Even, if after death the vessels are almost empty, we have no proof that there was not a determination to the part during life.

We shall now give in the author's own words, a summary of his reasoning on the points in which his father and Dr. Pring differ.

"It is very evident, from what has been said, that Dr. Parry, in many respects, differs materially from the able author upon whose doctrines I have taken the liberty to animadvert. He does not attempt to explain the process by which blood is accumulated in a part under excitement, or in the numerous cases in which no external local excitement is perceptible; neither does his doctrine necessarily imply an increased amount of this fluid. In all instances, he presumes upon a difference of general or local susceptibility, towards the several effects which are manifest, arising from certain previous tendencies or dispositions; and admits, that, 'whether local morbid determination occurs from causes acting primarily on the part, or secondarily through the medium of excessive general impetus, it is equally difficult to explain the process by which it is effected.' Whatever this process may be, the palpable symptom induced, under accumulation of blood, is, as before observed, a dilatation of the vessels."

This essay ends with a defence of Dr. Parry against the criticisms of those persons who accused him of employing blood-letting as a universal remedy. Nothing could be farther from his practice.

In his fourth essay Dr. Parry denies that his father totally disregarded the nervous system. We may observe, that the elder Parry certainly viewed the nerves as mysterious in their office, and as of much inferior importance to the sanguineous system. When he first began to practice, indeed, nervous diseases were ill understood; and thus, such diseases, when in his opinion they should have been treated with depletion and the antiphlogistic regimen, were almost universally pampered with cordials. The practice of Dr. Parry has of late years been much acted upon; and we have had many proofs of its efficacy in those diseases, which, without being maniacal, have a strong tendency to mania. Did our limits permit we could give cases in proof of this from our own practice.

Many of our best modern authorities, who are even inimical to Dr. Parry's views, have complained of the impenetrable obscurity which still pervades the diseases of the nerves; and the doctrines they have advanced very seldom in the least elucidate them.

"What is there," says our author, "in fact, in the doctrines recently developed, which supersedes or contradicts those which inculcate the extensive and important influence of the circulating system in its admitted connection with the various maladies of the human frame? Is not this system the most obvious and secure guide for our practice? Are not the rules of our experience derived from a consideration of its relations, of far more extensive and of more certain application, than those which are founded on an imaginary excess, deficiency, or modification of nervous influence? Are the organic changes in those finer parts of our mechanism so distinctly cognizable, as to offer evidence of their existence during life, or alone to indicate, after death, the precise nature of the fatal malady? Are the changes in the brain itself, for instance, so perceptible, as to point out a determinate relation with any pathological or therapeutical views? Will it be contended that the functional or even organic changes of the nervous structure are, in any respect, matters of sensible evidence?"

Some writers of the present day have suspected that the disorders of the nervous system may in most instances be only secondary affections. But very far, our author observes, are the nervous theorists, those keen opponents of Dr. Parry, from the discovery of any one real principle of disease; and they know nothing of the real phenomena of causation. Were we even to take the trouble of understanding their metaphysical speculations, would our knowledge of morbid phenomena be in the least advanced?

After speaking with great respect of Dr. Wilson Philip, and his fine-woven speculations concerning the nervous system, our author observes:—

"That the usual disease, both as regards the voluntary and involuntary muscles, as an effect of blood in a morbid relation, seems more probable than any explanation taken from mere excess or defect of invisible nervous energy; and it is also more probable that remedial plans must have that former agency in view. If, of nervous excess or deficiency in the system, we practically know nothing; and if of various stimuli, which, according to experiments, may affect the muscles by irritation of the brain, the blood is universally present, always fluctuating, liable to varying determinations in force and extent, from causes momentarily acting; if it be a stimulus, which, from experience, we can trace in its operations on many organs, inducing inflammatory and other changes in the cerebral and nervous as well as other structures; it does not appear why we should not still place a reliance upon this

system, even under the admitted physiological facts derived from an improved acquaintance with the nervous constitution. Spasms and other similar affections are even now more easily explained by this intermediary, than by any exclusive dependence upon a supposed nervous influence."

The Nervists say that secretion is entirely under the control of the nervous system; while our author interposes in favour of the circulating system. But why should not both systems mutually assist? *Utrumque per se indigens, alterum alterius auxilio eget.* And this undoubtedly was Dr. Parry's opinion; though he gave, as his son gives, most of the labour to the circulating system. With regard to the supposed discovery that indigestion is the offspring of deficient nervous energy, the author has thus expressed himself:—

"It appears," he says, "that the data, by which the nervous connection in the pathology and symptoms of this disease is established, are very insufficient; and that in our therapeutical considerations, we can place little reliance upon the nervous theories. Admitting the importance of the alleged discovery, we can but set it down as one among many other means of more palpable application, and perhaps, of as beneficial effect. Although it were true that the want of digestion were connected with deficient nervous energy as a stimulus, we neither derive from such knowledge a certain general rule of practice, nor the power of adapting our treatment to the particular circumstances of the case. Here, as well as elsewhere, we must have recourse to visible agencies, or to experience."

Neither is there proof that sympathetic diseases are independent of the blood; certainly nervous apoplexy is not so if such a disease exists. It is on the facts of the sanguiferous system we must rely as our guides in practice, and not on the evanescent and mysterious properties of the nervous system. The recent physiological doctrines are of great interest; but, says our author:—

"The neurological systems of pathology are still eminently defective, and the therapeutical indications are derived from uncertain and intractable principles. 'Our safest practice, even in the present day, is that which best suits our faculties.' Put together all the cases which have been strictly called nervous, in which, under an admission of the required data, medical practice is supposed to have improved, or which are supposed to supersede that exclusive attention to the sanguiferous system, which has, in ignorance, been charged upon its advocates, do they bear any proportion to those which may be arranged under other heads? or, rather, do they not form a very insignificant catalogue, in comparison of those which are palpably connected with derangements of this important part of the animal economy; or require, for their treatment, the consideration of other related agencies?"



Dr. Parry, his son contends, is not understood, nor is the nature of nervous affections understood; according to the view taken of them by that eminent physician. Nervous habits are not necessarily connected with exhausted states of the constitution; on the contrary, as we ourselves have observed, symptoms decidedly nervous frequently occur in the young, the beautiful, and the healthy.

"The predisposition to these varieties of nervous affection is generally, in fact, found in the young, and otherwise vigorous, and is often independent of exhaustion, or extraordinary excitement. No more complete instance of nervous affection, in all its degrees, can be exhibited than is at present witnessed by the author of these remarks in a young female of fortune, of healthy and florid appearance, of habit temperate, of mental feelings unsophisticated, and uninjured by any demoralization from ill-conducted education or habits; in whom hysterical susceptibility of impressions, tremors, palpitations, swimming, fancied or real fallings down, occur, with a pulse generally regular, an appetite sufficiently good, and a cheerful temper. It may not be devoid of interest to mention, in this place, also, that the original case of nervous affection, which gave rise to the observations of Dr. Parry so long ago as the year 1785, still continues to furnish abundant evidence of the accuracy of his conclusions. Notwithstanding a comfortable state even under this highly nervous predisposition, a comfortable state of health has, by care and management, been enjoyed, occasional relapses, of the greatest possible degree of violence, take place. The most powerful convulsive efforts under these attacks are extended, almost without intermission, through several successive weeks. Every muscle in the body is thrown into the most extraordinary contortions, Hiccup, and spasmodic suppressions of the breath, occur almost suffocation. Under these circumstances bleeding affords a temporary relief, and compression of the carotids has, in repeated instances, once suspended all the violence of the compressing agent. Nature immediately recur on the removal of the compressing agent. Natural remedy in this case is a very copious hæmorrhage from the nose, which is frequently continued, almost uninterruptedly, for seven or eight hours. In the interval of freedom from these symptoms, the patient has the characters of health, and is capable of much exertion."

We here close our Review of Dr. C. H. Parry's work. should not be severe on a pious son who has borne arms for his father's cause; it is a hallowed cause; but the adam breast-plate of Caleb Hillier Parry needed not to be defended by the bull's-hide shield of his son. To speak plainly, the is but a meagre work, destitute of the vigour and animation which characterize genius, and which are so conspicuous in the writings of the elder Parry. The author, however, is of better things, and if, in his future works, he study neatness of detail and greater energy of diction, he may yet

PARIS' *Elements of Medical Chemistry.*

me our analysis of this very interesting  
the following well written extract :—

how sensible the perfume of flowers be-  
evening dew, or in the morning, when the  
dissipated by the rays of the rising sun. For  
stench of putrid ditches, and common sewers, is  
organs of smell much more speedily in Summer, pre-  
sented, when the air becomes charged with moisture. We  
therefore, be surprised to find that heat and moisture have ever  
a favourable to the origin and propagation of epidemic diseases.  
the most subtle of all poisons—the *matter of contagion*—is undoubt-  
edly modified in activity by the degree of moisture in the atmosphere,  
influencing its solubility and volatility. On the other hand, it may be  
stated that the *Harmatan*, a wind experienced on the western coast of  
Africa, between the equator and 15 degrees North latitude, blowing  
from north-east towards the Atlantic, and which, in consequence of its  
passage over a very extensive track of arid land, is necessarily cha-  
racterised by excessive dryness, puts an end to all epidemics, as the  
small pox, &c.; and it is even said that at such a time, infection  
does not appear to be easily communicable by art.

“Eudiometry, in its present state, is too imperfect to enable us to  
appreciate the presence of various animal and vegetable substances,  
which are so generally present in the lower region of our atmosphere;  
and by which the salubrity of the air appears to be materially affected.  
All living bodies, when crowded together, generate a peculiar matter  
which would seem to be highly destructive. No species of animal can  
congregate in ill ventilated apartments with impunity. Under such  
circumstances the horse becomes infected with the *glanders*, fowls  
with the *pip* or *pep*, and sheep with a disease peculiar to them, if they  
be too closely folded. The same fact occurs in the vegetable kingdom,  
and nature would seem to have established this law, in order that the  
extent of her productions might be limited to those bounds which were  
essential to the well-being of the whole. The unhealthiness of crowded  
cities must arise from a similar cause, and, although the chemist is un-  
able to detect the deleterious principle, it would be vain to deny its  
existence.

“It has been stated that a certain portion of carbonic acid is present  
in the purest air; but in cities, and apartments in which persons have  
breathed, or combustible matter has been burnt, this proportion is ex-  
ceeded, and its excess must be regarded as injurious. *Sulphurous*  
*acid* may also be occasionally present in an atmosphere which has been  
impregnated with the vapour of burning coal; the air of London con-  
tains it, and to its presence we may probably attribute the well-known  
fact of iron oxidizing with such rapidity. A quantity of carbon, in  
a state of extremely minute division, is also diffused through the air of

our city, which cannot but prove injurious to the health of the inhabitants. The presence of such adventitious bodies is amply sufficient to explain the effects which are known to attend a constant residence in the metropolis, as well as to account for the feelings of relief which its inhabitants experience from occasional migration.

“Oxygen gas appears to be the only part of the atmosphere which is essential to the maintenance of respiration and life. No gas with which we are acquainted can be substituted for it, and an animal, inclosed in a definite portion of air, lives a longer or a shorter period, according to the proportion of oxygen present. When an animal, however, has expired in a quantity of atmospheric air, in consequence of its being no longer fit for respiration, it is still found that the whole of the oxygen is not removed from it; but in this case the death of the animal is to be rather attributed to the presence of carbonic acid, than a deficiency of oxygen, for it has been shewn by Lavoisier that where the expired air was exposed to a substance capable of combining with this deleterious body, the life of the animal was protracted. The azote does not appear to be absorbed in any notable degree, but remains passive, and is received into, and emitted from the lungs without undergoing any change; its only use in the atmosphere would seem to be for the dilution of the oxygen. Such, at least, is the most probable opinion, although some philosophers have concluded that there is an absorption of azote as well as of oxygen.”

The capacity of the Lungs is the next subject of inquiry. It has been variously stated, and Dr. Paris has given the different opinions on the subject.

“It will be evident,” he says, “from the foregoing statement that the portion of air expired is not exactly that which was inspired immediately before, but a portion of the mass which the lungs contained after expiration: and if the volume of air that the lungs usually contain is compared with that which is inspired and expired at each motion of respiration, we must suppose that inspiration and expiration are intended to renew, in part, the considerable mass of air contained in the lungs. This renewal will be so much the more considerable as the quantity of air expired is greater, and as the following inspiration is more complete. In cases of extreme fatigue, the ordinary inspirations are probably less ample than necessary, and hence we are under the necessity of occasionally interposing a forced inspiration to supply the deficiency. The same fact will explain the deep sighs of those affected by reverie.

“The nature of atmospheric air having been already explained, we may now consider the physical and chemical changes which it undergoes during its passage through the lungs. In its exit from these organs its temperature is nearly the same as that of the body; and it appears from the experiments of Messrs. Allen and Pepys, that the same quantity is given out at each expiration, as was inhaled by the previous inspiration; its chemical composition, however, undergoes material

change, it returns charged with aqueous vapour, called *pulmonary transpiration*, which is evidently alone derived from the secretion lining the bronchiæ and air vesicles, although Lavoisier imagined that it was generated by the union of the oxygen of the air with the hydrogen given off from the blood. Different authors have attempted to estimate the quantity of water thus produced; the celebrated Santorius, who devoted so large a portion of his life to the investigation of the quantity of matter perspired from the body, under different circumstances, estimated the pulmonary exhalation at about half a pound in twenty-four hours; Dr. Hales supposes the quantity to be about twenty ounces; Dr. Menzies, about six ounces; and Mr. Abernethy, nine ounces, or three grains in a minute. The fact is, that the quantity must not only vary considerably in every individual, but with every hygrometric change in the air."

Atmospheric air after having been admitted into the lungs, returns charged with carbonic acid.

"The only change then that has been satisfactorily proved to take place in respired atmospherical air, is the removal of a certain quantity of oxygen (its nitrogen being wholly untouched), and the substitution of a precisely equal volume of carbonic acid gas."

When it is remembered, says Dr. Paris, that respiration

"Is the first and last act of life, that it cannot be suspended, even for a few seconds, without the extinction of vitality, we are inevitably led to conclude that it must impart some principle too subtle to be long retained in our vessels, and too important to be dispensed with for the shortest period; what this principle or energy may be, we shall probably never learn. The contemplation, however, of the secondary and more obvious phenomena is within our grasp; already has the Physiologist and Pathologist derived important lights from the investigation, and the progress of Chemistry will, without doubt, extend and correct the views which have been thus formed, and suggest new applications of practical utility.

"Whatever may be the principle communicated, or the medium through which it passes, muscular energy is undoubtedly in some manner connected with the function of respiration. Those animals which are furnished with the most perfect pneumatic apparatus enjoy the highest degree of muscular power. Comparative anatomy will furnish us with many beautiful illustrations in support of this theory; birds are enabled to sustain the exertion of flight, in consequence of their extensive organs of respiration; and many insects, in the act of flying, disclose avenues of air, which, in their quiet state, are closed by the cases of their wings, thus procuring for themselves a larger supply of the principle of muscular energy, at a period when, from their exertion and consequent exhaustion, they must require it; flat fish, who having no swimming bladder remain at the bottom, and possess but little velocity, have gills that are quite concealed, whilst those who encounter a rude and boisterous stream, as trout, perch, or salmon, have them widely

[illegible]

the consumption of oxygen varies and increases considerably, I will infer, as a result of, that a greater or less amount will be made upon exposure, depending on, the degree of muscular exertion which is made. My colleague, Dr. Hall, has been especially aided by observation and experiment. It has been found that the quantity of air determined by respiration, in a given time, will vary with the degree of exertion made by the animal combined in it. Savoius states that a man, under ordinary circumstances, consumes 1300 or 1400 cubic inches of oxygen in an hour, but he found that if he is engaged in raising weights, the consumption is at the rate of 3,200 in the hour. The practical inference to be deduced from this fact is obvious, that where it is an object to economize the oxygen, we should remain tranquil. It was accordingly observed in the black hole at Calcutta, that those who were quiet and orderly suffered the least. In like manner, a person who falls into the water in a state of syncope will remain a much greater time submerged with impunity, than one who is in a condition to exert his muscular faculties.

The proportion of oxygen consumed by respiration appears moreover to be influenced by the nature of the diet. The quantity of carbonic acid emitted at each expiration, and consequently that of oxygen inspired, varies at different periods of the day, and probably also in different individuals; it appears at its maximum during digestion, and at its minimum in the morning, when the stomach is empty and when no chyle is flowing into the blood. Dr. Prout has shewn that fermented liquors and vegetable diet diminish the proportion of carbonic acid, and that the same thing happens when the system is affected by anasarca. The influence of vegetable diet in diminishing the call for oxygen has been very satisfactorily proved by the observations of Mr. Spalding, the celebrated diver, who found that whenever he used a diet of animal food he consumed in a much shorter time the oxygen of the atmosphere as he in his diving-bell, and therefore he had increased his expensiveness in respiration himself to a vegetable diet. The same effect is noticed in some fishes the use of fermented liquors, a fact in agreement with the observations of De Prou, and the therefore great sparkling has been what he supposed his profession. The same is the case of some of the lowest quadrupeds, which are almost entirely aquatic, neither being terrestrial, but even aquatic in kind. We observe, however, that in some of the marine stores of the poliporous system, which are wholly aquatic, the same is not the case.

The question of national transportation is one of the most important, especially for the future of the country. The Government is now taking steps to improve the roads and to develop the air and waterways. It is also considering the possibility of building a national system of highways. These steps are necessary to make it possible for the people to travel more easily and to do business more efficiently. The Government is also interested in the development of the railroads, which are still one of the most important means of transportation in the country. It is planning to improve the existing lines and to build new ones where necessary. The Government is also interested in the development of the shipping industry, which is one of the most important means of transportation for the country. It is planning to improve the existing ports and to build new ones where necessary. These steps are necessary to make it possible for the country to trade more easily with the rest of the world. The Government is also interested in the development of the inland waterways, which are one of the most important means of transportation for the country. It is planning to improve the existing canals and to build new ones where necessary. These steps are necessary to make it possible for the country to transport goods more easily and to do business more efficiently. The Government is also interested in the development of the air transportation industry, which is one of the most important means of transportation for the country. It is planning to improve the existing airports and to build new ones where necessary. These steps are necessary to make it possible for the people to travel more easily and to do business more efficiently. The Government is also interested in the development of the national transportation system, which is one of the most important means of transportation for the country. It is planning to improve the existing lines and to build new ones where necessary. These steps are necessary to make it possible for the country to transport goods more easily and to do business more efficiently.

practice. In humoral asthma, solid food, with a diminished quantity of liquids, should be prescribed. The same regimen will be useful in excessively damp weather, when the air is incapable of carrying off the *halitus*. Nor does the watery part of the blood alone escape by pulmonary transpiration; various substances which find their way into the circulating current, very soon pass out by the lungs. To this fact many expectorants are indebted for their efficacy, and I have assumed it as the basis of a new classification of these remedies. Garlic, and various fetid gums, when introduced into the stomach, are soon absorbed; and being transported to the lungs, they pass into the bronchial vessels, and may be recognised by their odour, in the expired air. M. Majendie has made many experiments by injecting various substances into the veins; and their presence has been afterwards discovered in the pulmonary *halitus*."

We cannot enter here into the question whether animal heat is the result of respiration; but we may observe that Dr. Paris has very fairly stated the whole subject at issue betwixt Dr. Crawford and Mr. Brodie.

We have been so full upon respiration, that we must omit noticing combustion, muriatic acid, iodine, nitric acid, and ammonia.

Scheele was the first person who obtained the prussic, or hydrocyanic acid in a separate form. It contains six times its volume of water, and has the following characters:—

"It has a strong smell of peach blossoms, or bitter almonds; its taste is at first sweetish, then acrid, hot, and virulent, and excites coughing; it has a strong tendency to assume the form of gas; it does not completely neutralize alkalies, and is displaced even by the carbonic acid; it has no action upon metals, but unites with their oxides, and forms salts, for the most part insoluble; it likewise unites into triple salts with these oxides and alkalies. The peculiar odour of this acid could scarcely fail to suggest its analogy to the deleterious principle that rises in the distillation of the leaves of the cherry-laurel; bitter kernels of fruits, and some other vegetable productions; and M. Schrader, of Berlin, has ascertained the fact, that these vegetable substances do contain a principle, which, like the Prussic acid, are capable of forming a blue precipitate with iron; and that with lime they afford a test of its presence, equal to the prussiate of that earth.

"The concentrated acid, prepared by the process of Gay Lussac or Vauquelin, is a colourless liquid, possessing a strong odour; and the exhalation, if incautiously snuffed up by the nostrils, may produce sickness, or even syncope. It acts as a quick and violent poison; an animal is instantly killed by merely drawing a feather, dipped in the acid, across the eye-ball; in this manner M. Majendie constantly terminates the sufferings of those animals which he has made subservient to his physiological researches. Its taste is at first cool, but soon becomes

hot and acrid, but I should not recommend the student to verify this statement by experiment."

Under the head of sulphur, we observe that sulphuretted hydrogen gas is unrespirable, and highly destructive to animal life.

"A small bird was found to die immediately in air, containing  $\frac{1}{100}$  of its volume of sulphuretted hydrogen; a dog perished in air mingled with  $\frac{1}{100}$ ; and a horse in air containing  $\frac{1}{100}$ . It has long been considered a very energetic poison to man, and it would, at the same time, appear to be a very insidious one; for sensibility is quickly destroyed by it, without any previous suffering. I am acquainted with a chemist who was suddenly deprived of sense as he stood over a pneumatic trough, in which he was collecting the gas. It would seem to act upon the nervous system through the medium of the blood, in which it is extremely soluble. It constitutes the particular gas of privies, and is the immediate cause of those accidents which so frequently befall nightmen, and of which I have given a full account in another work. In order to detect its presence, we have only to expose a piece of card moistened with white lead and water mixed."

As our limits will not allow us to extract any thing from the heads of phosphorus, metals, and salts, we pass directly to the third part, or Organic Chemistry.

"The products of the animal and vegetable kingdoms are distinguished from the compounds hitherto described, by the increased number of their elementary atoms, and the delicately balanced affinities by which they are held united; they possess, therefore, a greater variation in qualities, with a less permanent or stable constitution; and hence, without a single exception, they are decomposed by high temperature, and are even liable to spontaneous changes from the re-action of their principles on each other, constituting the various phenomena of fermentation and putrefaction, by which new compounds arise that are serviceable to fresh process for the support of animal and vegetable existence; so that, as it has been well observed, what delights us in the fragrance of the rose, may at a future season nourish us as bread, or exhilarate as wine."

Their ultimate elements are few in number; oxygen, hydrogen, and carbon, and sometimes azote. But the ultimate analysis of organic bodies was long an extremely rude and imperfect process.

"At length a gleam of light burst upon this obscure subject, from a new method of manipulation proposed by Gay Lussac and Thenard. It consisted in distilling the subject, in contact with some body that contained oxygen in so loose a state of combination, as to be driven off at the temperature of ignition, and by uniting with the whole of the carbon, to convert it into carbonic acid, and with that of the hydrogen, to generate water. Numerous analyses have been already conducted upon

this principle; all of which conspire to prove that the elements of organic, like those of inorganic matter, are united in definite proportions; and farther, that the law of simple multiples holds strictly with respect to their combinations. This is a very important step in the advancement of these researches, as it enables us to correct, by calculation, the errors of experiment, and to estimate the proportions of elements, which would otherwise require complicated processes for their discovery."

We have not space to enumerate the proximate principles of vegetables, but we shall notice some of them as we go along.

The existence of *vegetable extractive* has been doubted. After giving some account of it, Dr. Paris has made the following observations:—

"From the characters above described, it might be presumed that sufficient evidence of its existence, as a distinct and independent proximate principle, had been obtained; but in pursuing its history through the series of plants in which it is supposed to exist, we find that the characters thus assigned to it are by no means uniform; indeed there would appear to be almost as many varieties of extract as there are species of plants; the extractive of saffron, for instance, which is considered as the principle in its least equivocal form, possesses properties which are not to be found in other instances; it is capable of assuming many different colours; its natural hue is yellow, and its aqueous solution becomes colourless by the action of the sun's rays. Sulphuric acid dropped into it imparts a deep indigo blue; nitric acid, a green; nitrate of mercury, a red, &c., whence Bouillon la Grange gave it the name of *Polychroite*. 'It may, however, be doubted,' says Dr. Henry, 'whether these changes are not produced in some substance accompanying the extract, rather than in the extractive matter itself;' and it is by no means improbable, that the other modifications of character which it presents may depend upon its union with different principles. The insolubility which it acquires by exposure to air, is perhaps its most uniform and important peculiarity, and it should guard the pharmaceutic chemist against subjecting medicinal plants containing it as an essential constituent; such, for instance, as senna, Peruvian bark, &c., to those operations by which this change is liable to be produced."

*Colouring matter, gum, vegetable jelly, and starch*, are next examined; but it is doubted whether the first and third are really principles. The *starch* obtained from potatoes is not different in its chemical composition from that of the cerealia. Neither are the following, viz.:—

"INDIAN ARROW ROOT, obtained from the *Maranta Arundinacea*; SAGO, prepared from the pith of the palm tree, *Cycas Circinalis*, the brown colour of which is occasioned by the heat used in drying it; while its granular forms is imparted to it before it is completely dry, by forcing it through apertures of the proper size. CASSAVA is prepared from the roots of the *Jatropha Manihot*, a South American plant,



the juice of which is so virulent, that the Indians employ it for poisoning their arrows, and yet the starch which subsides from it, when well washed and dried, is made into a nutritious bread. *TAPIOCA* is the same substance, under a different form, which it assumes on drying. *SALOP* is derived principally from the *Orchis Masculæ*."

But the same kind of nutritious fucula may be produced from a variety of plants.

M. Taddei, an Italian chemist, has lately ascertained that the gluten of wheat may be decomposed into two principles, which he has distinguished by the names *Gliadine* and *Zimome*. To M. Taddei, the discoverer of *Zimome*, we are also indebted for a simple test for the detection of its presence. When powdered guaiacum is worked up with gluten, or still better with pure *Zimome*, a most superb blue colour is produced. This change, however, is not effected unless the contact of oxygen be allowed. This resinous body, therefore, furnishes a re-agent, capable of detecting the injurious alteration which flour sometimes undergoes by the spontaneous destruction of its gluten, and also of ascertaining, in a general way, the proportion of that principle.

Albumen probably differs but little in its composition from gluten.

Elastic Gum, Sugar, and Tannin, are next considered. The solution of tannin, with that of isinglass, or any other animal jelly, "instantly forms a dense coagulum, insoluble in boiling water, and which in fact is *leather*; for upon such a combination the art of tanning hides entirely depends. This fact naturally suggests a question of great practical importance to the physician! whether in cases of debility, where it is necessary to administer medicines containing tannin, we ought, at the same time, to administer gelatinous food as nourishment. As mere chemists we can feel no hesitation in deciding in the negative; but, in another work, I have frequently observed that the laws of *Gastric* chemistry differ from those which regulate the combinations of the laboratory; the matter, however, is doubtful; and under such circumstances, it will be right if we err, to err on the safe side, and to prohibit the use of such dietetic restoratives, during a course of astringent medicines."

Of the bitter principle, the fixed and volatile oils and wax, we need say nothing.

"The true vegetable acids, and those which exist, ready formed in the juices or organs of plants, and require for their extraction only some mechanical process. Others are also obtained, which appear to be rather *products* than *educts*, and are either entirely new arrangements of the elementary matter of the plant, or native acids disguised by combination with other vegetable principles.

Some of the acids to be described will also be found to be both educts and products, such are the acetic, malic, and oxalic acids."

These are all carefully enumerated; but we can afford room for only a few cursory extracts.

"From the resemblance which the crystals of oxalic acid bear to those of Epsom salts, many fatal mistakes have arisen, and various measures have been proposed for preventing the recurrence of such accidents; but as they are hastily dissolved and swallowed by the unwary, it is impossible that any chemical test, however delicate, should answer the purpose. The acid taste is in itself a sufficient mark of distinction; or, without tasting it, if a few drops of water be placed on a slip of the dark blue paper which is commonly wrapped round sugar loaves, and a small quantity of the suspected crystal be added, if it be oxalic acid, it will change the colour of the paper to a reddish brown. The solution also of a small quantity of this acid in a little water, will effervesce with common whiteing, an effect which is never produced by Epsom salt. From the history of the many cases on record, it appears that this acid produces all the grievous symptoms which characterize the action of a corrosive poison. The instant that the accident is discovered, we should, as quickly as possible, endeavour to form an insoluble oxalate of lime; copious draughts of lime-water or magnesia and water, should be administered; and vomiting immediately excited."

Tartarized antimony should be always purchased in a crystallized state. Its solution is decomposed by the mineral acids and by other substances.

"The decoctions and infusions of several vegetables, as cinchona, and other bitter and astringent plants, equally decompose tartar emetic; and the precipitate, in such cases, always consists of the oxide of antimony, combined with the vegetable matter and cream of tartar. It behoves the physician, therefore, to be aware of such incompatible mixtures. When heated with carbonaceous matter, this salt is decomposed, and metallic antimony is obtained. From this phenomenon, and the deep brownish-red precipitate by hydro-sulphurets, this antimonial combination may be readily recognised."

The substances included under the division of *vegetable alkalies*,

"Are bodies of recent discovery; and there is reason to believe that the order is no less numerous than that of vegetable acids, although it is probable that some of those lately discovered will turn out to be merely disguised modifications of each other. They appear to exist ready formed in the vegetables from which they are procured, and to which they would seem to impart medicinal power; and, although they do not bear a degree of activity, proportional to their concentration, still many of them are likely to become important instruments in the hands of the skilful physician."

With very few exceptions they are all bitter; and their

powers on the animal body are *cæteris paribus* in the direct ratio of their solubility.

Our author has given a very accurate account of these bodies as far as they are known; but probably many others will be yet discovered. Some of them are not without danger to the experimenter; thus with regard to *atrophia* which is derived from *atropa belladonna*.

"M. Brande was obliged to discontinue his experiments on this subject, in consequence of the violent headache, pains in the back, and giddiness, with frequent nausea, which the vapours of this alkali occasioned while he was working on it."

Under the head of vinous fermentation, we have a list of wines, with the proportion of alcohol contained in each.

"When," says Dr. Paris, "the intoxicating powers of wine and spirit are compared, it must be admitted that they bear no proportion to the quantity of spirit which they contain; it has, for instance, been shewn that Port, Madeira, and Sherry, contain from one-fourth to one-sixth of their bulk of alcohol, so that a person who takes a bottle of either of them will thus take nearly half a pint of alcohol, or almost a pint of pure brandy! and moreover, it is known that wines which have been found by experiment to contain the same absolute proportion of alcohol, possess very varying powers of intoxicating. We cannot, therefore, be surprised at the scepticism which has existed on the subject of the alcohol's pre-existence in vinous liquors. The fact, however, is easily reconciled by the physiologist, who is well aware of the extraordinary powers of chemical combination, or even of mixture, in modifying the activity of substances upon the living system. I have already commented so largely upon this fact in the first volume of my *Pharmacologia*, that in this place it is only necessary to state, that in wine the alcohol would appear to be so intimately combined with extractive matter that it is incapable of exerting its full effects upon the stomach, before it becomes altered in its properties by the powers of digestion. This remark, however, applies only to pure wines; such as are *brandied*, contain the alcohol in an uncombined form, and are consequently as powerful as the same quantity of spirit in a similar state of dilution."

We shall give our closing extract from the article entitled *Panary Fermentation*.

"Newly baked bread has a peculiar odour as well as taste, which are lost by keeping; this shows that some peculiar substance must have been formed during the operation, the nature of which is not understood. Bread differs very completely from the flour of which it is made, for none of the ingredients of the latter can now be discovered in it; it is much more miscible with water than dough; and on this circumstance its good qualities most probably, in a great measure, depend; it is not easy to explain the chemical changes which have taken place; it appears certain that a quantity of water, or its elements, is

consolidated and combined with the flour; the gluten too would seem to form a union with the starch and water, and to give rise to a compound upon which the nutritive qualities of bread depend.

"Much has been said and written upon the subject of the adulteration of bread; but I am inclined to believe that the evils arising from such a practice have been greatly exaggerated. It is certain, that the inferior kinds of flour will not make bread of sufficient whiteness to please the eye of the fastidious citizen, without the addition of a small proportion of alum. It has been said that the smallest quantity of alum that can be employed for this purpose is from three to four ounces, to two hundred and forty pounds of flour. It cannot be denied that the habitual and daily introduction of a portion of alum into the human stomach, however small, must be prejudicial to the exercise of its functions, and particularly to dyspeptic persons of a costive habit, and to children.

"The earthy adulterations which have been sometimes introduced into bread, must be regarded as a much more serious evil; some years ago the flour in Cornwall was very generally adulterated with the white felspar, which is used in the porcelain manufactory, and much mischief arose from its use. It is, therefore, very necessary for a medical practitioner to be prepared with such knowledge as may detect the fraud. For this purpose, the suspected bread should be incinerated at a red heat in a shallow earthen vessel, and the residuary ashes treated with nitrate of ammonia; the earths themselves will then remain characterized by their whiteness and solubility."

We have thus finished our Review of this interesting work, which is worthy to become the manual for chemistry of every medical student. Its details, whether original or selected, have been arranged with great judgment, and are given in a style of language, which, without being gaudy, is elegant and impressive. The author's style, indeed, might have done honour to a Cicero; but Cicero, had he written in English, would not have said: "it has neither taste or odour."

With regard to the materials of the work, we have found little or nothing to condemn; but though we had, we should have studiously avoided a contest with so judicious and veteran a chemist: for though controversy may amuse a reader, it will not add much, in general, to his information. We have been much pleased with the author's diagrams; for being placed on the very page with the experiments they illustrate, the reader does not find it necessary to recur perpetually to distant plates for an explanation. We are also pleased that the author has given the old names to the chemical compositions employed in medicine.

Dr. Paris speaks highly of the French chemists, and has praised Henry, Ure, and Murray; but the merits of the celebrated, though cynical, T. Thomson seem to have made but a faint impression on him; at least he never mentions his *System* or his *Elements*.

ART. III.—*The Study of Medicine. Second Edition.* By JOHN MASON GOOD, M. D. &c. &c. &c. 5 vols. 8vo. pp. 329 London, 1825.

WE have already expressed our satisfaction at the re-appearance of this valuable and elaborate work, in a new edition. Of such a work, indeed, when we consider it to be the composition of one man, we may say, with truth, that the age of laborious diligence is not past, and that there is still an individual amongst us who can devour and digest whole libraries. This would no doubt be surprising even in a man of a retired life, but it is doubly so in one who is a practical physician, and a poet of no mean fame. For learning, for research, for original observation, where is the practical system of the present day, we may fearlessly ask, that can be compared to it? Surely not the crude compilation of Thomas, or the meagre Elements of Gregory! No: for even the First Lines of Cullen, the Commentaries of Van Swieten, the Practice of Lieutaud, and the Nosology of Sauvages, must shrink from a comparison.

Of the first edition of the work we spoke so fully, and with so much deserved praise, that we can now only consider those parts which its very learned author has pointed out to us as new.

#### *Cholera of India.*

The first of these is that dreadful scourge of eastern countries, the Spasmodic Cholera of India, of which Dr. Good has given a full and satisfactory account, in so far as it can be obtained from MS. and printed authorities. It has proved nearly as fatal as the plague, destroying about seven in every hundred. From official documents in the India House, it appears to have been known a century ago in the Bengal territory; such as it was described by Dellon in 1689. It has already spread to the western parts of Persia and has committed great ravages there, even in a cool hilly district; so that probably it may make its way to Europe. In the opinion of many it is contagious; and we think there are facts in support of that opinion.

Of a disease that has been so long before the public, we dare not say much; but we may observe, that scarcely any case of it occurs without an alarming congestion in one or more of the larger organs, so that it is highly dangerous to depend on stimulants alone as a means of cure, without the previous employment of evacuants; but, probably, there is more than one species of the disease; for we find Dr. Rankine of the Bengal establishment treating both calomel and the lancet with contempt, and

recommending exclusively from the first, opium and the most diffusible stimulants in large doses. There is certainly, however, with the exception of the plague, no disease in which the living power is so rapidly exhausted.

*Syphilis*.—The next subject of consideration is Syphilis. On the question, whether the disease is most easily cured with or without mercury, Dr. Good enters at some length.

“All,” he says, “we can fairly select from such a collection of facts and opinions is a confirmation of the conjecture I have already ventured to throw out, that syphilis, like many other diseases, is capable of being greatly modified by contingent or habitual concomitants ; or that it has actually changed its character, and is in a progressive course of melioration.”

He concludes the subject with the following passage :—

“The result of this inquiry, therefore, should by no means induce us to relinquish the use of mercury as of specific influence in general practice ; but it is of great importance as offering solid consolation to those who may be labouring under the disease with an idiosyncrasy or acritude of constitution that forbids the use of this specific, and converts it into a poison instead of receiving it as a remedy.”

In our review of Lagneau on Chancre, in a former Number, we explained what Dr. Good calls acritude of constitution, by referring to a febrile state of the system which is incompatible with the exhibition of mercury, and ought always to be previously subdued in the usual way.

“To what then are we to ascribe the wonderful contrast presented to us in these two colonies of the same empire ? Is syphilis regulated by some such law as that of plague which seems incapable of existing in an atmospheric temperature above 80°, or much below 60°, and hence has never been able to obtain a footing in Abyssinia or the South of Arabia, while it has rarely appeared earlier, as an epidemic than June or July, in our own country ? Or is it affected by any other meteorological influence. The question is of no small moment ; for if it be either the atmospherical temperature of the West Indies that produces so striking and beneficial an effect upon the specific poison of syphilis, it may be found that the best asylum we can provide, even for those who are actually labouring under the disease, and in its rankest form, is the same quarter ; so that Barbadoes or Jamaica may in process of time become as general a resort for syphilitic patients as Madeira or the South of France for consumptive.”

The next circumstance with regard to Syphilis, is the habitude of the disease in the West Indies, so that the whole army in that part of the world does not furnish more syphilitic cases than two regiments do in the East Indies.

“But the following tables,” says Dr. G. “will give the reader an

opportunity of calculating for himself, and will show that the difference is sometimes much greater. The Report from the whole of the West Indies for the year 1823, which I take as being the latest, is as follows :—

|   |    |
|---|----|
| " Cases of Syphilis unaccompanied with secondary symptoms...        | 16 |
| " Doubtful or Bastard Syphilis .....                                | 15 |
| " Simple Buboës . . . . .   | 5  |
| " Annual number of cases for the whole of the West Indies, in 1823. | 36 |

" Now the Report from the 1st or Royal Regiment alone, for the same year, stationed at Trincomale, gives 177 cases of syphilis, without any subdivision into genuine and doubtful.

" In like manner, during a preceding year, while the 12th regiment of Light Dragoons furnished the following Report :—

|                                    |     |
|------------------------------------|-----|
| Cases of Syphilis . . . . .        | 64  |
| Secondary symptoms . . . . .       | 6   |
| Doubtful ulcerated penis . . . . . | 5   |
| Buboës, . . . . .                  | 2   |
| Cachexia Syphiloidea, . . . . .    | 7   |
| Gonorrhœa, . . . . .               | 26  |
| Hernia Humoralis, . . . . .        | 15  |
|                                    | 105 |

The Report for the same year, from the whole of the West Indies, gives—

|                              |    |
|------------------------------|----|
| Cases of syphilis, . . . . . | 41 |
| Buboës, . . . . .            | 29 |
| Hernia Humoralis, . . . . .  | 40 |

110

" From the uncertainty which still prevails respecting the specific nature of several of the above affections in the minds of many practitioners, they are returned as of a common family; and however unscientific such an arrangement may be in itself, it, at least, enables us to draw a more satisfactory general conclusion, as showing that none of the forms of disease which, in the widest latitude of the term, can be referred to a syphilitic origin, are here kept back.

" I was, in effect, not a little surprized at finding how few Reports respecting syphilis have been sent home from the West Indies, compared with those from the East, till Dr. Gordon convinced me, from the nature of those which have been received, of the difficulty of making out any such Reports whatever in particular years; and pointedly directed my attention to a remark in one of them transmitted by Mr. Tegart, a highly intelligent inspector of Hospitals at Barbadoes, as though offering an apology for the scantiness of his returns upon this subject :—" One gentleman, Mr. Taylor, of much learning and great experience in the island, who has resided here nearly thirty years,

says, that in that long period he has only seen two cases of primary disease. The fact is, continues Mr. Tegart, "that syphilis is almost unknown in this country:" alluding to the West Indies generally.

*The Yellow Fever.*—In order to lessen the mortality of this disease in the West Indies, the Army Medical Board has been the means of establishing, in three Islands, Barbadoes, Tobago, and Antigua, open and wide-spreading encampments, instead of confined and unventilated barracks; and with wonderful success. In Barbadoes, particularly, the mortality is almost incredibly abated.

"I have examined," says Dr. Good, "the tables subjoined to the Annual Reports in the office of the Army Medical Board, and have found that, from having been upon an average of seven years, about one in twenty-one of the sick list, in the year 1822, the mortality was only twenty-four; and in 1823, only one in thirty-five. In this last year, however, it should be observed that the Hospital list was somewhat enlarged by the occurrence of an influenza, unaccompanied with much danger; yet the aggregate of patients amounted to not more than about a hundred beyond the preceding year. I am ready to allow that several other important regulations, for which we are equally indebted to the vigilance and the judgment of the Army Medical Board, may have contributed to this salutary change, but the greater part of it is still, perhaps, to be ascribed to the new plan of encamping. I cannot give a better description of the advantageous regulations I am now referring to, than by adopting the words of Mr. Tegart, an enlightened inspector of hospitals at Barbadoes, who, in his manuscript Report for 1823, thus enumerates them, and at the same time confirms the ameliorated health of the soldiers quartered in that station, and to which I have just referred, "The loss in that year," alluding to 1822, or the preceding, "was so comparatively small with former ones, that I hardly hoped to send so favourable a one again. This return, however, exceeds greatly any hopes I could have anticipated; being not one half the average amount of the preceding six years; and not a sixth part of the yearly loss sustained in the fourteen antecedent to those. There are many reasons for this favourable change; the men are better clothed, better fed, and better looked after by their officers; there are many local improvements in the vicinity of the barracks, which formerly were not so much attended to. Such as draining swampy and marshy ground, clearing away brush-wood and long grass, which harboured moisture, and emitted, at certain seasons, noxious exhalations, producing fever and other diseases, the treatment of which was very different from that of the present day. I believe most sincerely, that we are also indebted for the favourable comparison in the scale of mortality to the improved education of medical men, to the discoveries in the various branches of medical science, and to the rationale of medical practice."

*The Small-Pox.*—This disease is very easily affected by ac-



cidental influences; and a predisposition to it seems to be destroyed by idiosyncrasies of various kinds.

"There are other changes," says the author, "introduced into the constitution from numerous causes, which, though they do not take off all predisposition from every individual to whom they are applied, afford an entire exemption in many cases, and exercise so controlling a power in others, that the general character of the disease, whenever it makes its appearance, is greatly modified, and for the most part greatly mitigated; so that the accompanying fever is considerably less violent, the secreted fluid instead of being a creamy pus, is a limpid ichor, desiccating in three days, and so far imperfect in its elaborations as to be less capable of propagating itself by contagion or inoculation, or of affording an absolute security against a reproduction of the disease in future: whence many persons, from the writings of the Arabians to those of our own day, are said to have suffered from small-pox not only twice, but even three or four times in succession. In these accounts, mistakes have, perhaps, often been committed as to the species or even genus of the eruption; but in various instances the disorder has been so narrowly watched, and the judgment of the physician who has described it has been so sound and unimpeachable, as to leave no fair ground for doubt upon the subject."

Of the nature of constitutional peculiarities which control the eruption, Dr. Good professes to know nothing; and of their causes we know only a few; such as the virus of cow-pox, and that from the ulcerated heels of horses; but perhaps other diseases are among these causes. It is to these peculiarities of constitution, that the diversity of the disease is owing; for, according to Dr. Thomson, the different branches of the same family, receiving it in succession from each other, evinced in turn almost every variety of small-pox, the distinct, confluent, crystallized, or varicellous and horny; whilst from these again the disease was sometimes propagated in its purest or pustular form.

Dr. Good has entered at some length into the controversy about the identity of small-pox and chicken-pox, and after weighing the matter carefully, he gives it as his opinion that they are distinct diseases. Dr. Thomson is the great champion of their identity at present, having, from data obtained during the prevalence of the variolous epidemic in Scotland, revived the dispute, after some of the most eminent physicians, foreign and domestic, had to appearance settled it for ever.

"It is not a little singular," says our author, "and tends in the strongest light to show the discursive powers of human genius, when aided by the resources of learning, that at the very moment of this new attempt to combine diseases which have of late years been regarded as distinct, or as claimed in various form by another genus; Dr. Willan, who had laboured hard

to support and rivet such distinctions, was engaged in the arduous task of establishing the identity of small-pox and plague, in that variety of the latter which makes the nearest approach to small-pox, and which we have already referred to under the name of erythematous. His researches, which have been published posthumously, by his learned relative, Dr. Ashby Smith, are written with an amenity and antiquarian interest, that fully entitle them to a place in every medical library, whatever becomes of the question itself, and have undoubtedly brought conviction home to the minds of not a few. So that if the whole of these elaborate lucubrations could maintain their ground, plague, small-pox, chicken-pox, pemphigus, and, perhaps, cow-pox, grease-pox, measles, and scarlet fever, would all be resolvable into one common malady, and derivable from one common virus. While, as another learned attempt has been set on foot by a third body of pathologists of no mean authority or pretensions, to show that plague itself, in this case the primary and original source of them all, does not exist in any shape, nor ever has existed, as a specific disease; and is nothing more than a typhus or malignant fever, with an accidental appendage of efflorescences, eruptions, or tumours of various kinds, modified by a host of contingencies (to which Dr. Frank is also a party in his first volume), the whole system of pyretology seems in the present day, to have some chance of being concentrated into a marvelously small compass, and for the benefit of future students, may perhaps be engraven on a silver penny. But where the land-marks of disease are thus successively broken down one after the other, till no guiding post is left, how is the young student to make his way over the trackless common before him?"

Dr. Good has also refuted, in a learned and interesting investigation, Dr. Willan's opinion that the small-pox and the plague are identical.

From our author's admirable account of the *Paropsis Cataracta*, we make the following extract, as it alludes to the possibility of a medicine being yet found to cure it; and admonishes us of the ulcerative inflammation of the eye which sometimes follows an operation:—

"There is specious ground," he says, "for conceiving that some medicine might be discovered capable, by some general or specific action, of producing a like change, and proving a remedy for the disease; and the more so as we find ganglions and other accidental deformities frequently removed from the extreme part of the system, by external or internal applications. But no such remedy has hitherto been discovered, or at least none that can be in any degree relied upon; excepting in those cases of supposed, but miscalled, cataracts; which have consisted in a deposition of lymph from an inflammation of the iris and ciliary processes; for recourse has been had to mercurial preparations, both external and internal, as well as almost every other metallic salt, aconite, the pusque-flower, or pulsatilla, to prevent vomiting, electricity, and

puncturing the tunics of the eye, but without any certain advantage. This is the more to be lamented, because, whatever surgical operations may be determined upon as most advisable, there is no guarding, on all occasions, against the mischievous effect which may result, I do not mean from the complication or severity of the operation, for this, under every modification is simpler and less formidable than the uninitiated can readily imagine, but from the tendency which is sometimes met with from idiosyncrasy of habit, some peculiar acrimony, or other irritable principle, to run rapidly into a state of ulcerative inflammation, and in one night, or in a few hours, in spite of the wisest precautions that can be adopted, to endanger a total and permanent loss of vision. I speak from personal knowledge, and have in one or two instances seen such an effect follow after the operation had been performed with the utmost dexterity, and with every promise of success; and where a total blindness has taken place in both eyes, the operation having been performed on both, neither of them being quite opaque antecedently, and one of them in nothing more than an incipient state of the disease, and the patient capable of writing and reading with it. And hence it is far better in the author's opinion, to have a trial made on one eye only at a time, and that the worst, where both are affected and one is still useful, than to subject both to the same risk; for the sympathy between them is so considerable, that if an inflammatory process, from any constitutional or accidental cause, should show itself in either, the other would be sure to associate in the morbid action."

Of the variety of the *Paropsis Strabismus*, or squinting, which he names habitual, and which he regards as curable, Dr. Good observes:—

"The method of cure that I have myself found by far the most effectual, is to blindfold the sound eye with a blink for a considerable part of every day; and thus force the affected eye into use, and a subserviency to the will. I recommend this simple plan most strongly, and especially in the case of children; and may venture to predict that it will be sure to succeed in the first variety of the disease, that of habit, and frequently in both the others."

In the *Lachrymose Ophthalmia*, or that which is seated principally in the sclerotic coat of the eye, Dr. Good disapproves of blisters applied to the temple; but he approves of them in O. Iridis.—The O. purulenta metastatica has been doubted of by some physicians, but the author gives it a place on the authority of St. Ives, Scarpa, Bell, Edmonstone, and Plenck; to which we may add his own.

"I was lately consulted," he says, "by Mr. G—, of Great Russell Street, who had been long labouring under an ophthalmia, that had assumed a chronic and less violent character, and which appeared to be very much of the present variety. His former life had been irregular; and he had twice before had a clap suddenly cease upon a severe inflam-

mation of the eye. I had no reason to suppose that the present inflammation was the result of such a transfer; but as he had been for some weeks attended by a surgeon of considerable eminence, who had already exhausted, although in vain, nearly the entire treasury of medical resources, I could not avoid observing, that as there existed so close a sympathy between the mucous membrane of the eye, and the urethra, probably the most speedy and effectual means of carrying off the present inflammation would be some accidental irritation of the urethra. No steps were taken to effect this; and I was, therefore, the more astonished at finding, about three days afterwards, that such an irritation had accidentally occurred, accompanied with a considerable flow of purulent fluid from the glans; and I was peculiarly pleased to find that from this time the ophthalmia began to diminish, and that a complete cure was effected in about a week."

In that most distressing complaint, the *O. purulenta* of infants, remedies are often of little avail. Dr. Good has not seen all the benefit from Bates's powerful and stimulant astringent, which Mr. Ware ascribes to it; at least in the acute form.

"The plan," he says, "that has proved most effectual, in my own course of observation is, to syringe the eyes thoroughly, so that the whole of the purulent discharge may be washed out with a solution of alum in water, in the proportion of not less than a grain to an ounce; to continue this syringing three times a-day, to keep the bowels open, scarify the gorged vessels of the conjunctiva where it can be done, or apply leeches to their under surface, and surround the forehead lightly and loosely with folded linen, wetted with a lotion of one ounce of the liquor ammoniæ acetatis, mixed with seven ounces of water and kept cold in a bucket of ice. The child, in order to receive the full benefit of the solution of alum, should have its head laid flat between the knees of the operator, with the face uppermost; the lids should be separated from each other by the fingers, or if necessary, as it almost always is, by the assistance of a blunt silver spatula, or some other blunt instrument, and the point of the syringe, loaded with the astringent lotion, should then be introduced between them, and convey its contents all around: the syringing being repeated till the whole of the collected matter is washed away. The pain produced by the use of this solution is trifling, and the child ceases to cry almost as soon as the operation is over.

"If, when the inflammation begins to subside, an ulcer be detected on any part of the cornea, and especially if it be over the pupil, a solution of nitrate of silver in the proportion of a grain to an ounce of water should be dropped into the eye night and morning, after the syringing is over, and the eye be kept open for about half a minute, so that the solution may not be wiped away suddenly by the closing of the lids, but may fairly lie upon the ulcer and float over it for this period of time. The sulphate of quinine should also be given, dissolved in a small quantity of water, to as great an extent as the infant can bear it; and if

looseness be produced; it should be checked by a drop or half a drop of laudanum in each draught. Prussiate of potass is also a very good astringent for contracting the area of the ulcer, and expediting the healing process; and may be used instead of the solution of the nitrate of silver, in form of an ointment, by means of the unguentum cetacei. By careful perseverance in this process, I have not only seen ulcerations on the cornea heal speedily, but in one or two instances without leaving any cicatrix to impede the vision, even where the ulceration has been seated over the pupil."

The causes which produce *Erythema Anatomicum*, and other analogous inflammations of the cellular texture, in a constitution peculiarly disposed, are very numerous.

"Among the more common of these causes are venesection; the exposure of a pricked or pimped finger to the fluids of a recently dead subject; the bite of a venomous serpent; the application of various secreted irritant or chemical acrids to an abraded part of the cuticle; and a small superficial but jagged wound made by a flesh-hook or other mechanical instrument. Now all these causes, with the exception of the bite of a venomous serpent or other animal, are perpetually taking place without any mischievous effect whatever. And hence it is obvious, that unless there be some kind of aberration from the common law or powers of health in the part affected, or in the general frame of the individuals, that occasionally suffer from the application of such causes, and thus evince an exception to the ordinary course of nature, there could be no mischievous effect at any time."

The immediate cause has been ascribed to idiosyncrasy alone, acted on by a simple irritation, to a putrescent fluid, and to a specific virus. The latter opinion Dr. Good thinks is the true one.

"Whatever," he says, "be the difficulty of conceiving the existence of a specific virus generated shortly after death, and before putrefaction takes place; it is far more difficult to withhold our assent from such an explanation, or to account for such effects upon any other principle.

"It may perhaps, in a slight degree, assist the pathologist in his future inquiries into this obscure subject, to observe that we have ground for believing, that a new and active compound of some kind or other is constantly forming antecedently to the process of putrefaction, at the moment the living power, as well in plants as in animals, is ceasing to exist, and a play of affinities commences, which this power has hitherto restrained. In plants this usually appears in the form of a saccharine principle, perhaps a saccharine acid; among mankind in that of a phosphoric acid, and often, from its combination with other elements, of a phosphorescent light." "M. Cuvier tells us, that M. Percy, who during twenty-five years of war, had under his care more than a million of wounded, and had often been obliged to dress wounds in the dark, had frequently observed a phosphorescent light to issue from them, especially when extensive and dangerous, and where the living power was

at a very low ebb. And he found, also, that the way of rendering this emanation visible is that of applying an aqueous fluid, as in the case of reviving the phosphorescent light of recently dead animals. In one instance, says he, a vivid light, a true *ignis fatuus*, existed for more than six days over the wound of an officer which had been dressed with compresses, wetted with pure water only.

"I pretend by no means to say that new and active, but virulent and contagious materials, formed, perhaps, always in the human, and apparently in other animal bodies, on the cessation of the living principle, and when the laws of chemistry, hitherto held in subjection by the operation of this principle, now begin to assert their sway, is of either of the kinds I have thus adverted to. I have only endeavoured to draw the attention of the physiologist to the subject, by showing that some peculiar and extraordinary compounds, of a very diffusive and active kind, are assuredly formed on the immediate termination of life; and to urge him to search after compounds that have not hitherto been explored."

Whatever be the contagious material, it appears to pervade equally all the fluids of the decomposing body, whether natural or morbid.

"The ordinary progress of the complaint," says our author, "cannot be better described than by copying the sufferings of Professor Dease. His demonstration took place on a recent subject on February 13th, 1819, at one o'clock. He awoke early the ensuing morning with severe rigors, sickness, and acute pain in the left shoulder. On the next day a slight fulness was observed above the clavicle along the left side of the neck, which could not bear the slightest pressure. On the day succeeding, a colourless swelling was noticed about the axilla, which first suggested the real nature of the complaint: and on examining the hand there was found by Dr. Colles the mark of a slight scratch with a superincumbent vesicle. He appeared to improve a little for a day or two, though full, florid, and crimsoning erythema occupied the side in the region of the pectoral muscle, extending downwards. On the morning of the 19th he showed delirium, and a vesicle appeared on his fore-arm which remained stationary to the last. By the next day the erythematous swelling had extended over the entire side of the body from a little below the axilla to the hip; and the swollen part became studded pretty thickly with indurated papulæ: the delirium being more confirmed. On the 21st, the inflammation completely involved the axilla, and on its posterior edge an abscess seemed to have formed, though there was no fluctuation. At this period the opposite or right arm exhibited an intumescence on its anterior part, occupying about a hand's breadth of the flexor muscles, which was punctured on the same evening, and discharged about a tea spoonful of serous fluid, but without relief; and within an hour or two afterwards, being the eighth day from the accession of the disease, he expired.

"In very many cases however its issue is of a happier kind, and where this occurs, sometimes, about the eighth day, a gentle diaphoresis or diaphœ lubricates the harsh and burning skin, a sound and refreshing sleep succeeds, the pain and inflammation diminish, and the patient advances to recovery in a straight path. But more generally an effort is made to form lodgements of imperfect pus, bloody serum, or gangrenous ichor; often of all these combined, in particular parts of the affected side, most commonly indeed in the axilla; which swells into an enormous bag, and if not opened by art bursts spontaneously, and discharges the complicated and pent up fluid to an amount of several pints; the whole of the cellular membrane on the affected side being broken down into the general mass, with numerous sloughs and skeins of fibres detached from the adjoining muscles and thrown out in loose bundles. The cure is long and doubtful, in proportion to the range of the ulceration and the extent of the gangrene, and the patient is often so much reduced as to be in danger of falling a sacrifice from hectic fever or some other secondary affection. But when he has reached this stage he generally succeeds in the end, though the skin over the injured part is considerably shrivelled from the loss of the cellular texture beneath, and often attached to the subjacent muscles."

To produce it, it does not seem of moment what the disease was, of which the patient died; but fortunately the idiosyncrasy of most anatomists renders them not at all susceptible of its influence.

Dr. Good has never read nor heard of a case that proved fatal when the disease has been ushered in with local inflammation; nor has such a case in general been attended with much danger. Here a fatal sweat is often critical; indeed it has perhaps never occurred but in those who recover. It must not be confounded with the fever which precedes death.

With regard to the curative means for Erythema Anatomicum, Dr. Good speaks thus:—

"A highly stimulant diet though most essential in the bite of the more poisonous serpents does not seem to be of equal use in the erythema before us; nor, in the slighter cases, has any benefit been found from the use of a ligature. The excitant plan has been tried by some, and the antiphlogistic by others; but both have too often failed, and a remedial mode of practice is still a desideratum.

"Considering the great benefit that results from fixing the inflammation in the hand and fore-arm, it appears reasonable that our first attempt should be to concentrate or recal it towards the punctured or abraded part; not by destroying the life of such part, as has too often been done by caustics, but by powerful and pungent irritants, as camphor, turpentine, or ammonia. Our next object should be to counteract the inflammation that takes place in the axilla, and in the region of the pectoral muscle, by a free use of leeches or cupping-glasses; while the constitutional symptoms should be opposed by opiates

and sudorifics. We have already seen the high and critical advantage which has arisen from a general diaphoresis : and the present author (Dr. Good) has observed more benefit from the free use of Dover's powder, acting in this manner and allaying the nervous and constitutional irritation, than from any other medicine whatever."

In a few cases the disease runs into a chronic form of most pitiable suffering, lasting for years, and preying in succession on a variety of organs.

We were present at the dissection of a fat young woman, who had died of inflammation of the bowels. Out of three surgeons who assisted at the dissection, two were attacked, in a day or two, with Erythema Anatomicum. The one, a stout and somewhat corpulent young man, had the disease in the hand and one arm as far as the elbow, followed by constitutional fever. The arm and hand, in the first instance, were merely dusted with parched flour, the bowels were kept open, and saline and antimonial medicine occasionally administered. An extensive suppuration took place at length, the matter was discharged freely, and the patient ultimately recovered.

The other, a slender young man, affected occasionally with dyspeptic ailments, had severe inflammation in the axilla, extending to the neighbouring parts, which was treated with leeches, and the antiphlogistic regimen ; but, notwithstanding, the glands in the axilla suppurated. He recovered also, but he was much longer ill than the patient, and even after he was out of danger, remained long in a desponding state.

The former of these two persons was not aware that he had been penetrated or scratched, but the extremity of his shirt sleeve had been soiled by fluid from the dead body, and had been rubbed in that state, for a short time, against the volar side of the wrist.—The body was examined on the day after death, and, though it emitted a disagreeable smell, it certainly was not putrid.

*Marasmus Anæmia.*—On this disease, to which our author gives the English name of Exsanguinity, we must not dwell long, as descriptions of it have appeared in other periodical publications. The following is our author's definition of it :—

"Face, lips, and general surface ghastly pale; pulse quick and feeble; appetite impaired; alvine evacuations irregular, black, and fetid occasionally, with severe griping; languor and emaciation extreme."

The striking peculiarity of the disease is the bloodflessness of the vessels, both external and internal. It has been described by various authors, and even so far back as 1663; but not as a really distinct disease, till within these few years that Professor



Halle, of Paris, and Dr. Combe, of Edinburgh, have thrown considerable light upon it. The conditions of their patients were very different. Yet the symptoms in both were exactly similar. Professor Halle's patient was a miner, Dr. Combe's a respectable agriculturist.

Of Dr. Combe's case, our author has given a very full account, and has made some observations on it which we extract:—

"It is impossible," he says, "to conceive a more total exhaustion of the vital fluid from the entire system than this singular case presents to us; and instead of wondering at the deadly waxiness of complexion, the feebleness of the pulse, the utter debility and emaciation which this incarnate ghost must have presented, the greater and almost the only wonder is how the living principle could so long have remained attached to so exhausted a receiver, and the sensorial fluid have derived its means of recruit; at a time too when all the functions, in the midst of their feebleness, were urged on by the force of the morbid excitement to the performance of double duty: the pulse was quickened, the animal spirits maintained above the standard of sober health; the peristaltic action, though irregular, for the most part accelerated, the perspiration redundant, and the urine often profuse.

"The post-obit examination, while it unveils little or nothing of the proximate cause of the disease, discloses to us most manifestly the inroad that had been made upon the general substance of the frame for the want of a due supply of nourishment, and how completely every organ had been living upon itself, and the whole had been living upon the remnant of the blood almost to its last drop. The fault, therefore, does not seem to have been so much in the siccernent system or assimilating powers as in the lacteals or digestive function; in the commencement rather than in the termination of the chain."

The body seems latterly to have nearly fed on itself.

"We have seen," says Dr. Good, "that the digestive function was habitually impaired, and that at length food of all kinds was rejected by the stomach; and we shall find by other instances that the stomach under the influence of this disease seems to be always even at its best state capricious, or fastidious. But the lacteals seem to have participated in the same infirmity; and to have laboured under an atony or paresis so considerable, though invisible to the eye of the anatomist, as to have transmitted whatever aliment might have been subacted very imperfectly or not at all, into the course of the circulation. And hence, while the blood actually in existence was perpetually drained off in support of the different organs and their respective functions, a small quantity only of an unelaborated fluid was able to reach the heart, and larger arteries which were in consequence pale and empty, or only partially supplied with a thin artery, and scarcely tinged liquid. And, in confirmation of this idea, the mesentery in various instances gives proof of disturbance, and appears enlarged even to an external examination, while the hypochondria are free from such affection."

The patients at the mine had been exposed for years to the odour of sulphurated hydrogen gas, and had occasionally drank of a coustic mineral spring, without injury.

"It is hence obvious," says Dr. Good that some new combinations of vapour, incapable of detection by the senses, had found vent into the atmosphere of the gallery; or some new mineral substance in its percolating water; which had a direct power of loosening and destroying the tone of the restorative system, at the commencement of its chain.

In the cure, which was rarely obtained, mercury, emetics, sudorifics, acids, sedatives, tonics, and stimulants, were all tried simultaneously, or in succession.

"But," says our author, "by far the most successful, as, indeed, the most rational plan, and that most corresponding with the nature of the proximate cause we have endeavoured to illustrate, consisted in a combined employment of the two last of these classes, and stimulant tonic medicines, with a free use of opium where the tormina required it, and the employment of gentle laxatives on the return of constipation. The best stimulants appear to have been camphor and ether; the best tonics, bark and iron. While this plan was continued, the patients generally improved in strength, lost their palpitations in walking, and evinced a slight return of colour; and in every instance in which this process was discontinued at too early a period, they appear to have relapsed; and only to have renewed their advantage upon return to the same treatment. The diet was generous and nutritious as it ought to be, and altogether harmonized with the pharmaceutic intentions."

*Melanosis Tubercularis.*—The following is Dr. Good's definition of Tubercular Melanosis :—

"The black secretion pultaceous, in encysted tubercles, pea-sized or walnut-sized, scattered in groups over most of the organs; chiefly below the surface, sometimes upon it: fever, mostly a hectic: great debility."

The disease has been long observed in quadrupeds; and something similar has been seen in the lungs of consumptive patients; but not till lately had it been noted in other parts of the human body. Its cause, progress, diagnosis, and mode of treatment, are at present obscure and unsatisfactory. Its treatment, indeed, we have yet to learn.

"In reasoning speculatively," says Dr. Good, "we should speak with great modesty. But admitting the material which forms the tubercles to be a peculiar secretion, and that the constitutional excitement consists mainly in this new and stimulant action, perhaps it may in future cases be found useful to combine the two intentions of allaying the peculiar irritations, and at the same time, urging the secernents to a renewal of their proper actions; or, in other words, to employ the con-

joint force of sedatives and counter-irritants, which may be effected by a union of opium, or Dover's powder, with the tincture of iodine. The great and beneficial influence which the latter is well known to exercise in many cases over strumous tubercles, should indicate its use on the present occasion. And it is also not improbable, from the approach which the disease occasionally makes to the more irritant cases of phthisis, in its excitement of the chest, and its hectic fever, that the hydrocyanic acid might, at times, with great advantage, take the place of all other sedatives. Such coincidence of symptoms, moreover, shows us clearly the place which melanosis should occupy in a digested nosological arrangement."

The characters of tubercular melanosis completely distinguish it from cancer and fungus hæmatodes.

"The points which have not hitherto been touched upon, and which seem chiefly to call for our attention, are the singular unity of action which seems to exist throughout the whole extent of the secernent system, in the production of the black material, during its state of morbid excitement: and the apparent issue of this action, and consequently of the black material hereby produced from a single source or organ. The first is too obvious, from the history already given, to need any additional remark: and, unless I much mistake, subsequent examples will prove that the second has as firm a foundation. Let the reader look back at Professor Alison's case, and pause over the state of the ovaria, as they appeared on dissection, and he will have little doubt, I think, that the disease commenced in this quarter, and hence radiated over almost every other organ."

For instance, it has commenced in the ovaria, and thence radiated over every other organ; also in the groin and in the right eye. It ramifies over the most compact as well as the most yielding texture. The nature of the black pigment is not known.

"The material to which it seems most nearly to make an approach in temperate climates is the black pigment of the choroid membrane, and perhaps that which is supplied from the rete mucosum as a colouring matter for black hair. Both these are evidently the production of the secernent system. They are indeed small in quantity; but if we turn our eyes to the intertropical climates, we shall find the same or a like jet pigment thrown forth over the entire surface, and continued by a permanent supply, as the tide antecedently furnished is carried off. And if we attend to the curious economy which takes place in this subject respecting the children of negroes, as we shall have occasion to observe more at large when treating of Epichrosis or Macular-skin, are nearly fair when first born, and only become coloured with the black effusion a few weeks afterwards; which at first gives little more than a tawney hue, but gradually advances to a jet."

The material of melanosis has not as yet been critically ex

amined, but it seems to be a combination of fibrin, fat, or the colouring matter of the blood.

*Entasia Rachybia*.—Under this name "Dr. Good has given a very interesting description of *muscular distortion of the spine*, which, it would appear, is a much more common disease than most medical men are aware of. The definition of our author is this :—

"Permanent and lateral curvature of the spine, without paralysis of the lower limbs: muscles of the back emaciated, mostly without soreness upon pressure."

The characters of osseous gibbosity are sufficiently clear and specific. But the muscles of the vertebral column, and their appendages, are of as much importance to its healthy contour as its bones.

"And hence any morbid affection in any of these moving powers may as essentially interfere with the natural curve of the spine, and the well-being of the constitution, as a disease of the vertebral bones."

In this disease the morbid curvature is to the right or the left side, according as the muscles on the one side or the other overpower the action of their antagonists, and the distortion is less abrupt or angular than in the osseous gibbosity. The disease was not unknown to Mr. Pott, though he has only casually mentioned it, in speaking of osseous gibbosity from scrofula. Thus,

"The hints he has given respecting distortions, from every other cause, have been too often forgotten; and the moment a young female is found to have a tendency to vertebral distortions of any kind, it has too generally been taken for granted that the bones were in a diseased state, or on the point of becoming so; that the patient was labouring under the influence of a strumous diathesis, which was manifesting itself in this quarter, and all the severe measures of caustics or setons, with an undeviating permanent confinement to a hard mattress, or inclined plane, for many weeks or months, which a strumous affection of this kind calls for, and fully justifies, has been imprudently had recourse to, with a great addition to the suffering of the patient, and, in many instances, no small addition to the actual disease, which has been so unhappily misunderstood."

The writers of the present day have also, very generally, looked upon all distortion of the spine as scrofulous; but some of them have contended, that every distortion of the spine is, in its commencement, muscular, while Dr. Harrison refers its origin to the connecting ligaments of the vertebræ.

"One of the chief difficulties," says Dr. Good, "in cases where we have no reason to apprehend a morbid state of the bones, consists in accounting for the change that seems to take place in the relative posi-

tion of several of the vertebræ, or their processes; and especially in the greater elevation or prominence of their transverse processes on one side, while those on the other are scarcely perceptible. And it is in truth chiefly to solve this question that most of the hypotheses of the present day are started in opposition to each other. The idea of an actual dislocation of the vertebral bones, which enters into that of Dr. Harrison, would sufficiently account for the fact, if such a dislocation could be unequivocally shown. But while the change of position does not seem in any instance to amount to a complete extrusion of a vertebræ from its seat of articulation, the ease and quietude with which, under judicious management, it often seems to recover its proper position, and to evince its proper shapes, are inconsistent with the phenomena that accompany the reduction of luxated bones in every other part of the body."

The explanation of Dr. Harrison has not been thought satisfactory. According to Dr. Dods, morbid curvation of the spine

"Does not consist in an evulsion of separate vertebræ from their natural course and position, but in a twist of a great part, or of the entire column, by which means the morbid lateral flexure is nothing more than the natural sigmoid sweep of the vertebral chain, wrested more or less round to one side, as by the turning of a cork-screw."

Our author enters largely into Dr. Dod's views, but as the hypothesis is not proved we shall say no more of it at present.

"There can be no doubt, however," says Dr. Good, "that the spinal distortion of the present day is a disease far more frequently of the muscles and their appendages than of the bones, and is the result of a want of equilibrium between the antagonist forces on the one side and on the other of the vertebral column, as well those of the trunk as of the back; in consequence of which this column is deranged in its natural sweep, and either twisted or deflected in particular parts, or in its whole length: all the other changes in the general figure and deviations from the general health being dependant upon this primary aberration.

"It is hence a disease of muscular debility, or irregular, and hence clonic action in the fibres of the yielding muscles, and an inability to resist the encroachment that is made on them by their more powerful antagonists.

"The complaint almost invariably shows itself from the age of puberty to that of mature life, though sometimes later; and is nearly limited to females, and among females, to those of delicate habits, and who are especially disciplined in the false and foolish rules for obtaining a fine figure. It is hence a perpetual inmate in our public female schools, and is by no means an unfrequent attendant upon domestic education."

The progress of the disease is insidious, and if it be neglected in its commencement, the vertebral column will soon be involved

in the morbid action. Among its occasional causes Dr. Good includes the various contrivances made use of to mould the human form into a more graceful shape than what has been received from the hand of Nature.

"A course of discipline," Dr. Good very properly observes, "for giving grace and elegance to the growing form, if conducted with judgment, devoid of rigorous compression to the expanding organs, and allowing of sufficient alteration and ease, so far from being injurious to the health and strength of the general frame, has a natural tendency to invigorate it. But the greater frequency of the lateral distortion of the spine in our own day, compared with its apparent range in former times, together with the increased coercion and complication of the plan laid down in many of our fashionable schools for young ladies, seems clearly to indicate that some part at least of its increased spread is chargeable to this source."

After quoting some remarks of Mr. Pott, to the same purpose, our author makes the following just and elegant observations:—

"The simple fact is, that the system of discipline is carried too far, and rendered much too complicated; and art, which should never be more than the hand-maid of nature, is elevated into her tyrant. In rustic life we have health and vigour, and a pretty free use of the limbs and muscles, because all are left to the impulse of the moment, to be exercised without restraint. The country girl rests when she is weary, and in whatever position she chooses or finds easiest; and walks, hops, or runs, as her fancy may direct; when she has recovered herself, she bends her body and erects it as she lists, and the flexor and extensor muscles are called into equal and harmonizing play. There may be some degree of awkwardness, and there generally will be, in her attitudes and movements; and the great scope of female discipline should consist in correcting this. With this it should begin, and with this it should terminate, whether our object be directed to giving grace to the uncultivated human figure, or the uncultivated brute. We may modify the action of the muscles in common use, or even call more into play than are ordinarily exercised, as in various kinds of dancing; but the moment we employ one set of muscles at the expence of another, keep the extensors on a full stretch from day to day, by forbidding the head to stoop, or the back to be bent; and throw the flexors of these organs into disuse and despal, we destroy the harmony of the frame instead of adding to its elegance; weaken the muscles that have the disproportionate load cast upon them; render the rejected muscles torpid and unpliant; sap the foundation of the general health, and introduce a crookedness of the spine instead of guarding against it. The child of the opulent, while too young to be fettered with a fashionable dress, or drilled into the discipline of our female schools, has usually as much health and as little tendency to distortion, as the child of the peasant; but let these two, for the ensuing eight or ten years, change places with each other; let the young heiress of opulence be left at liberty, and let

the peasant girl be restrained from her freedom of muscular exertion in play, and exercise of every kind ; and instead of this let her be compelled to sit bolt upright, in a high narrow chair, with a straight back that hardly allows of any flexion to the sitting muscles, or of any curvature to the spine ; and let the whole of her exercise, instead of irregular play, frolic and gaiety, be limited to the staid and measured march of Melancholy, in the *Penseroso* of Milton :

‘ With even step and mingling gait ;’

to be regularly performed for an hour or two every day, and to constitute the whole of her corporeal relaxations from month to month, girded, moreover, all the while, with the paraphernalia of braces, bodiced stays, and spiked collars ; and there can be little doubt that, while the child of opulence shall be acquiring all the health and vigour her parents could wish for, though it be with a colour somewhat shaded with brown, and an air somewhat less elegant than might be desired, the transplanted child of the cottage will exhibit a shape as fine, and a demeanour as elegant as fashion can communicate, but at the heavy expense of a languor and relaxation of fibre that no stays nor props can compensate, and no improvement of figure can atone for.

“Surely it is not necessary, in order to acquire all the air and gracefulness of fashionable life, to banish from the hours of recreation the old national amusements of battledore and shuttlecock, of tennis, trap-ball, or any other game that calls into action the bending as well as the extending muscles, gives firmness to every organ, and the glow of health to the entire surface.”

Dr. Good next speaks of the cure ; in doing which he has taken occasion to be a little sarcastic on Dr. Jarrold and his mode of treatment : and thinks that that gentleman has been more indebted to recumbency, friction, shampooing, pure air and occasional exercise, than to burnt sponge or carbonate of soda,

“In this disease,” he says, “ease and refreshment are the great points to be obtained, and whatever couch, or whatever position will give the largest proportion of these is the couch or the position to be recommended : whether that of supine extension, or relaxed flexure.”

Dr. Dods, in our author’s opinion, is wrong in proscribing an extended position in every instance.

“I have at this moment under my care a lady just of age, who, for four years past, has been labouring under a slight affection of lateral distortion, feeling much more of it whenever she suffers fatigue, or is affected in her spirits. A position strictly supine, and somewhat extended, upon a hard-mattress or a level floor is the only posture that affords her ease, and takes off the sense of weight on the spine, and oppression on the chest. She has often tried other positions, but in vain. To this, therefore, she has uniformly recourse after dinner, and occasionally at other times in the day as well. Pure country air has also been of great service, but above all things, sea bathing. She has just

returned from an excursion around the Devonshire coast. The first day's journey, though in a reclined position, in an open landaulet, with every attention that could afford ease and accommodation, proved so fatiguing, and produced so much pain in the spine, that it was doubtful whether she would be able to proceed. A better night, however, than was expected, capacitated her for another trial, and the fatigue was considerably less. On the third or fourth day she had an opportunity of beginning to bathe; by daily perseverance in the same she was enabled, soon after reaching Teignmouth, to engage in long walks, climb its loftiest hills, and enjoy the entire scenery: her appetite became almost unbanded, and her lagging spirits restored to vivacity."

*Mollities Cerebri.*—This affection of the brain, the *Ramollissement de cerveau* of French authors, has of late attracted a great deal of notice, particularly in France. Its actual cause, Dr. Good thinks, is often doubtful, and still more so whether it ever exists as a primary disease. Where inflammation has preceded it, masses of pus are often intermixed with the soft pulpy disorganization of the brain, which at times is of almost every diversity of colour. It is a disease which is generally found in apoplectic cases, and in dropsy of the head. After mentioning some of its symptoms, which are common in various other diseases, Dr. Good makes the following observations:—

"There are two other signs, however, pointed out by the French monographists, as more essentially distinctive, but which the present writer has never had an opportunity of noticing; these are a mouse-smell, or odour issuing from the body of the patient like that which is exhaled from the bodies of mice; and a movement of the lips on one side, accompanied with a rushing or whizzing sound like what is often exhibited by smokers in the act of smoking tobacco. For the production of these last symptoms, however, it is necessary that the disease should be accompanied with hemiplegia, so that one side of the mouth only is capable of motion.

"By far the greater number of these symptoms," he continues, "indicate atony rather than neutomy, of action; and hence, though inflammation is not unfrequently a proximate cause, debility, whether consequent upon inflammation, or any other morbid change, is, perhaps, a more common cause. Hence in our own country this organic mollescence has usually been regarded as a gangrene of the brain, and many of the French pathologists, and especially M. Recamier, incline to interpret it as the result of low atonic or malignant fevers, rather than of phlogotic action. With M. Rostan and M. Lallemand, however, it is ranked in a direct phlogosis, or phlegmasia, not resulting from apoplexy, but necessarily conducting to it, and producing it. Yet, as according to their own showing, the leading symptoms are those of turgescence and oppression, with increase of pulse or other excitement; it should seem to follow that they have, in a considerable degree, mistaken the cause for the effect, even where inflammation is co-existent."



Dr. Good accounts, very ingeniously, for the same cause atony, producing the opposite effects of softness and hardness in the one case the secernent vessels being debilitated, in the other the absorbent.

"There can be no question," he says, "that in proportion as the compages of the brain become looser and less resistable, effusions of serum and red blood, ulceration, gangrene, and a total dissolution of the entire substance, must in many cases follow as a natural result, and in the order here stated. And hence, in cancer of the brain the substance of the organ is always found in a softer or mollescent state. As a further proof that this peculiar change is for the most part a result of debility, it is admitted, both by M. Rostan and M. Lallemand, that it is by far most frequently met with in persons of advanced age. The former, indeed, asserts roundly that in the whole extent of his practice he has never met with more than one instance in which he was suspicious of it at or under the age of thirty; and as examination after death was not allowed him, he does not regard even this case as of any moment."

The spinal marrow has been also found, in certain parts of its extent, in a state of similar mollification.

*Trichosis Sensitiva*.—Sensitive Hair. This curious disease, an account of which first appeared in our Journal, has been added at the suggestion of that learned and indefatigable physician, Dr. Duncan, jun., of Edinburgh.

We have now finished our review of the new matter contained in the Second Edition of Dr. Good's masterly performance; and we can conscientiously recommend it to the attention of every medical practitioner, who is desirous of becoming acquainted with what has been done in his profession, in all ages, and in all countries. Dr. Good is a universal scholar; yet, though intimately acquainted with the learned and oriental languages, he writes English with facility and elegance; and we are sure, that every physician who is a man of taste and of learning, will peruse his pages with avidity and delight.

Dr. Good has displayed great intrepidity in the use of new words, the euphony of which is not always to be admired, but it is seldom that he uses them unnecessarily: and to a scholar they can create no difficulty. Upon his style we have bestowed great praise; but, in a future edition, we beg that he will discard from his pages, the Gallicisms "as well," "in effect," and the like.

**ART. IV.** *De la Membrane Muqueuse Gastro-Intestinale, dans l'Etat sain et dans l'Etat inflammatoire ; &c. &c.* Par C. BILLARD, *Ex-Elève Interne des Hopitaux d'Angers, &c.* Paris. 1825. pp. 559.

A work, such as the present, was particularly called for at a time when so much importance has been attached to the pathology of the mucus surface of the alimentary canal. In fact, the appearance of the mucous membrane of the intestines in the natural state, has been either so imperfectly noted, or has been described in such loose and general terms, that a standard was wanting, with which to compare what might be supposed to be the slighter degrees of variation from its healthy structure. In this instance, as in some similar ones, the French have preceded us ; and it cannot but excite some degree of surprize, when we find a work like this, remarkable for the number of facts it contains, as well as for the judgment and accuracy with which they are employed, proceeding from the pen of one, whom circumstances lead us to suppose must be a young man, and who at the time of collecting his materials, was merely a pupil at a provincial Hospital. Whether the credit in this instance is due to the sole merits of the individual, or in part to the system of education, and the institutions which opened the field to his exertions, the fact is in either case remarkable, and in the latter, deserves the serious consideration of all who are interested in the advancement of professional education in this country.

M. Billard's treatise is divided into two principal parts : in the first, he describes the natural appearances of the mucous lining of the alimentary canal ; and in the second, the changes of structure to which it is liable. It is to the latter part, that we shall principally call the attention of our readers. We shall previously, however, give an abstract of his conclusions, as to its appearances in a state of health, deduced from a considerable number of observations, made with that object, and of which he has given a detailed account.

*Healthy Appearances of the Mucous Membrane.*—"The colour of the mucous membrane in question is, in the fœtus, a fine rose red ; milky white in the period of youth ; and ashy white in adult age.

"When the alimentary canal is examined in individuals who have died during digestion, the mucous membrane lining the stomach, the duodenum, and even the beginning of the jejunum, are found of a faint rose red colour ; hence, probably, the reason why some anatomists have described this membrane as of a reddish white or grey colour.

"In the healthy state, the mucous membrane of the stomach is never marbled, or interspersed with blackish spots.

"Occasionally, in a state of health, yellow spots, or patches of greater or less extent are met with, apparently the result of a *post mortem* change not easily explained.

"The muciparous glands may not be apparent; or they may appear in small numbers on the inner surface of the stomach and intestinal canal; or they may be developed in great numbers, and that without producing any change in the state of health in the individual in whom they are found.—p. 123, &c.

In the second part of his treatise, M. Billard, proposes as his object, the determination of the characters presented by inflammation of the mucous surface of the intestinal canal, together with the means of discriminating this condition from those with which it might be confounded, and more particularly from the effects of passive congestions. With a view to the accomplishment of this purpose, he divides the appearances presented by it after death, into two heads: 1st. changes of colour; 2d. changes of structure; each of these with its varieties being separately treated of, according as it is or is not connected with inflammation. This mode of treating the subject, though it leads the author into a system of great subdivision, has many and obvious advantages on the score of method and precision.

*Morbid Changes of Colour.*—M. Billard reduces the changes of colour, met with in the internal surface of the alimentary canal, to four principal kinds; viz, red, brown, slate colour, and black. Between these, there are many intermediate shades, of which it is impossible to give a precise description.

**RED COLOUR.**—This M. Billard divides into six kinds; viz, 1st. Ramiform Injection; 2d. Capilliform Injection; 3d. Punctiform Redness; 4th. Striated Redness; 5th. Redness in patches; and 6th. Diffused Redness.

1st. *Ramiform Injection.*—This may be either the effect of inflammation, or merely a passive congestion. In the former case, the mucous membrane of the intestinal canal presents the appearance of small branches of blood-vessels injected with blood, unconnected with any considerable trunks, and so disposed, as to assume an elegant appearance. The author considers that it is the result of a slight degree of irritation, and that it should be viewed, either in the light of a trivial commencing inflammation, or as the trace of a more violent one, which has nearly subsided. He conceives, that it may exist without producing any evident disturbance of the functions of the digestive organs, and without causing symptomatic fever.

A similar appearance is often met with in a healthy condition of the mucous membrane. The vessels in this case are com-

only bluish, and belong to the venous system of the mesentery. The appearance is common in those who perish from certain affections of the lungs and heart.

2d. *Capilliform Injection*.—When dependent on inflammation, it consists in an inextricable network of small vessels, injected with blood. It is most commonly met with in the stomach, and small intestines. It frequently surrounds parts which are affected with a more decided degree of inflammation, or forms a circle around an ulcer or any other disorganized surface. In some instances it is so strongly marked, that at first sight, the injected surface might be taken for a uniform red patch.—After contrasting the appearances of the *Ramiform* and *Capilliform Injection*, M. Billard defends the minuteness of these distinctions, by pointing out the assistance they afford in giving accurate descriptions of morbid appearances.

“In *post mortem* examinations,” says he, “we are often told, that the mucous membrane was inflamed, a vague expression, that conveys no precise meaning. If, on the contrary, we learn, that there was capilliform or ramiform injection, we should be able to estimate the intensity of the inflammation, and to form a just comparison of the symptoms during life, with the appearances after death.”—p. 163.

It is of consequence to know the inflammatory characters of the capilliform injection, as a similar injection is often found on the surface of the intestines, when the blood has, from the mode of dying, stagnated in the ramifications of the abdominal vessels. Those characters are; the absence of any mechanical obstacle to the course of the blood; an empty state of the mesenteric and abdominal vessels; the vicinity of a part evidently inflamed; the thickening of the membrane, and its want of adhesion to the sub-mucous structure.

3d. *Punctiform Redness*.—Inflammation of the mucous membrane sometimes produces an afflux of blood to it, of such a kind that this fluid is found effused in small red points on the surface of the membrane, which then presents an appearance similar to that of the section of an inflamed brain. To use the comparison employed by M. Lallemand in the latter instance, the aspect of the membrane is in such a case similar to that of a sheet of white paper, sprinkled over with a red powder. This form of redness presents certain varieties: thus, in some instances, the small red points are ranged in a line, and thus form punctiform striæ; in others they are placed in a circle around an ulcer, or round the cardia or pylorus. It also often happens that red patches of greater or less extent are, in fact, formed by the union of a great number of small red spots, as may be discovered by forcibly distending the part of the intes-

tine on which they are placed. In general, the punctiform redness is to be considered as the trace of a slight inflammation only, particularly when it is not accompanied either by decided thickening of the mucous membrane, or by a morbid secretion of mucus.

It is also necessary to guard against the mistake of confounding with this effect of inflammation, the appearance of *punctiform redness* artificially produced by scraping the surface of the membrane with the scalpel. In the latter case, the redness is probably produced by the laceration of the small vessels, and the escape of the blood contained in them. Though it resists mere friction, it is quickly dissipated by maceration. To avoid the chance of such an error, the surface of the membrane should be merely cleared from mucus by washing it, or by wiping with the edge of the hand.

4th. *Striated Redness*.—This appearance presents itself under the form of a greater or less number of red streaks, varying in intensity, according to the degree of inflammation by which they have been produced. Their most striking character consists in their being placed upon the most prominent parts of the mucous surface, such as the folds of the stomach, and the valvæ conniventes of the small intestines. Taken singly, they do not form a very positive proof of the existence of inflammation, as similar appearances may arise from mechanical causes. M. Billard has related a very interesting case of asphyxia from drowning, in an individual who had recently taken food. He concludes, that the striated redness observed in the case in question was not the effect of inflammation, but that it was attributable in part to the fulness of the vessels of the mucous membrane naturally attendant on the process of digestion; and in part to the mode of death which favoured the occurrence of a passive local congestion.

5th. *Redness in Patches*.—Both experiment and observation have proved, that irritating causes applied to the mucous membrane of the alimentary canal tend to produce inflammation in those parts only with which they are in immediate contact. To prove this point, M. Billard quotes experiments performed on dogs by M. Boulland, which consisted in introducing pins and other sharp pointed bodies into the intestines, together with instances related by MM. Lallemand, Avisard, and Cruveilhier, of the fatal effects of tartar emetic, and of the morbid appearances produced by it. Dr. Abercrombie in his paper on the diseases of the mucous membrane of the intestinal canal, also bears testimony to the fact, that it may present an inflammatory redness in patches, the intervening spaces being healthy, and the

patches being somewhat elevated above them. According to M. Billard, these patches may either be simple and of small extent, or they may occupy a large space, and be complicated with thickening of the mucous membrane, and with an effusion of thick tenacious mucus. Similar appearances may sometimes occur without inflammation, but in such instances, it will not be difficult to form a distinction, by remarking that the mucous membrane will be found firm, and by the possibility of discovering some circumstances which may have contributed to produce a congestion of blood, in the abdominal vessels.

Under this head, M. Billard arranges Ecchymoses and Petechiæ of the mucous membrane.

*Ecchymoses* of the intestines are commonly produced in cases of violent death, caused by the sudden cessation of the action of the heart, or by an obstacle to the course of the blood in the great vessels. They are not uncommonly met with in those who perish by asphyxia, resulting from submersion or strangulation. In such cases they are found on the most depending parts of the alimentary canal, and co-existent with them a general injection of the abdominal vessels, some mechanical obstacle to the current of blood, and often an exsudation of blood in the ecchymosed part. Ecchymoses produced on the intestines by violent blows on the abdomen, or contused wounds of its parietes, speedily become inflamed, in case the individual should survive sufficiently long; in that case, however, they would present such characters of inflammation of the mucous surface as would prevent them from being mistaken for passive congestions.

*Petechiæ*, occurring on the mucous surface of the intestines, present appearances differing alike from the passive ecchymoses just mentioned, and from the ordinary inflammatory redness in patches. After the relation of a case from Stoll, together with two others observed by himself and M. Ollivier, the author concludes, "that the petechiæ met with on the viscera are similar to these observed on the surface of the body, and that they are formed in the same manner, viz. by the extravasation of blood exhaled in a way not easily explained, but which cannot in strictness be considered as inflammatory, particularly if a judgment is to be formed from the anatomical characters of such spots;—consequently as petechiæ occurring on the skin differ altogether from the ordinary inflammatory eruptions of that organ, so do the petechiæ of the mucous membrane of the intestines differ from the striæ, the patches, and the other forms of inflammatory redness found there.

6th. *Diffused Redness*.—This appearance occupies a more or less

considerable extent of the mucous membrane, frequently, also, affecting at the same time the other coats of the intestinal canal. It is the result of a degree of inflammation more violent than that which is indicated by the striæ or patches already mentioned. It is frequently combined with erosions and ulcerations, and often depends on the approximation of several patches. It is not invariably, however, a proof of pre-existing inflammation, unless we find at the same time, that the mucous membrane is thickened and easily to be lacerated, that it can be detached with more than usual facility, or that it is accompanied by a secretion of thick and puriform mucus. When this kind of redness is not the product of inflammation, it may depend on 1st. a passive congestion of blood in the abdominal vessels from the effect of disease of the heart and great vessels, or any other mechanical impediment to the course of the blood; or 2d. on a staining of the mucous membrane from the ingestion of articles of food capable of giving it a red colour, or from the presence of blood in the intestinal canal producing a similar effect.

The BROWN or VIOLET COLOUR of the mucous membrane does not present such a variety of aspects as the red. "Nine times in ten,"—says M. Billard—"it is caused by inflammation." The brown colour may either be uniform or marbled.

1st. *Uniform Brown Colour.*—This may almost uniformly be considered as indicating the previous existence of a chronic inflammation of the mucous membrane. It is generally interspersed with violet coloured streaks, corresponding to the course of the vessels. This, however, is not always the case, the brown colour alone extending over a considerable surface of the mucous membrane. The proofs of its connexion with previous inflammation consist in the thickening of the mucous membrane, the facility with which it may be separated from the subjacent cellular structure, and in the fact that the colour is not dissipated by maceration.

2d. *Marbled Brown Colour.*—The same remarks are in a great measure applicable to this appearance, except that there is every reason for supposing that it is an indication of an inflammation which has existed at a tolerably remote period, and not an evidence of recent disease. From their analogy in form and disposition to the red striæ already mentioned, M. Billard concludes that these brown marbled patches are in fact identical with them in origin, and that the apparent difference depends only on the more or less remote period at which they are viewed after their production. He thinks, also, that when in this state they form no impediment to the healthy functions of the mucous membrane on which they are situated; comparing

them in this respect to the discoloured patches which often remain permanently after certain forms of superficial cutaneous inflammation.

**Slate Colour.**—Under certain circumstances of inflammation, the gastro-intestinal mucous membrane acquires a very remarkable grey or slate colour, which presents itself either under the appearance of points and streaks, or is uniformly extended over a more or less considerable surface. Its immediate cause appears to consist in an effusion of blood within the mucous structure, which by certain processes, perhaps not very easily to be explained, loses its natural characters, and assumes those peculiar to the appearance in question. Judging from the remarkable analogy of their form and disposition, M. Billard is inclined to view these grey spots and streaks in connexion with the appearances already described under the heads of *Punctiform* and *Striated Redness*, concluding that as they differ in colour only, the one appearance is in fact the sequel of the other. This slate colour may be either uniform, or striated, or in detached points.

**Black Colour.**—This, where it exists, depends on the presence of the morbid structure, first described by MM. Bayle, Laennec, and Dupuytren, and to which they have given the name of Melanosis. According to M. Breschet, however, one of the latest writers on melanosis, it does not consist in a change of structure, or in a new production, as MM. Bayle and Laennec have stated, but rather in a deposition, in the natural structures, of a fluid probably produced by a process resembling secretion. This idea is in some degree supported by the analyses of MM. Barruel and Lassaigne, who detected some of the constituents of the blood in the peculiar matter of melanosis. It is, however, far from being proved that this form of disease is an immediate result of inflammation. At the same time M. Billard states that it deserves notice that melanosis is never met with on the internal surface of the intestines, without being attended by evident chronic inflammation of the mucous membrane, a fact fully proved by the cases he has related: in one of these, communicated by M. Beclard—

“The subject was a man of thirty, who had died of dysentery. The interior of the small intestine presented numerous small black spots, surrounded by greyish ulcerations. The interior of the large intestine presented similar ulcerations, larger, and separated by very dark black patches, giving a marbled appearance to the whole membrane. The intestines contained a fœtid grey fluid. The rectum, the end of the colon, the sigmoid flexure, and its fatty appendages were of a deep black colour, arising from the deposition of a stratum of black matter under the peritoneum.”—p. 330.



The inflammation in this case is attested by the ulcerations of the mucous membrane, together with the fact that the symptoms were those of dysentery.

We pass over some points of minor importance, in order to come to the Second Part, in which changes of structure in the gastro-intestinal mucous membrane are treated of. These M. Billard arranges under two heads: 1st. Changes of Structure which are without ; and 2d. Those with loss of substance.

#### CHANGES OF STRUCTURE WITHOUT LOSS OF SUBSTANCE.

1. *Emphysema of the Mucous Membrane*.—Contrary to the opinion of M. Scoutetten, M. Billard conceives that there is no sufficient evidence of the connexion of this state with inflammation, or of the manner in which it is produced. When it exists, the mucous membrane is raised in the form of small white bubbles, soft, elastic, and crepitating. It cannot with propriety be attributed to the occurrence of putrefaction, M. Billard having often witnessed it in subjects in a state of perfect preservation, and in one instance so early as twelve hours after death.

2. *Edema of the Mucous Membrane*.—This sometimes occurs without inflammation, in cases of anasarca or ascites. The folds of the mucous membrane of the intestines are found loose, moveable under the finger, and filled by the serum infiltrated in the submucous structure. In some cases the valvulæ conniventes are so swelled as to resemble phlyctenæ, and allow the escape of fluid when punctured. In some cases, however, the œdematous effusion coincides with a more or less considerable degree of inflammation, indicated by the appearances already described.

3. *Fungous appearance of the Mucous Membrane*.—In some instances the mucous membrane presents a fungoid appearance, similar to that of the exuberant granulations of old sores. When this condition is the effect of inflammation, the membrane presents irregular projections, thickly set, soft, thickened, and bloody. It is at the same time attended by more or less extensively diffused redness, and other evidences of a state of inflammation. Under certain circumstances, however, of impediment to the circulation, with general œdematous swelling of all parts of the body, the submucous cellular structure becomes œdematous, as already described, whilst, at the same time, the blood which cannot pass freely into the vena portæ, stagnates in its branches, and by the colour which it communicates to the mucous membrane, simulates the fungoid appearance connected with inflammation.

4. *Hypertrophy of the Mucous Membrane*.—Under this head M. Billard describes an effect of chronic inflammation, which

consists, not in a change of structure, but rather in a more full development of the mucous membrane as it naturally exists. In the only case of the kind which he has met with, the mucous membrane was at best four lines in thickness, red, and firm. Its inner surface was a purple red, and the villi were so much developed as to resemble the papillæ of the tongue.

5. *Excrescences of the Mucous Membrane.*—These do not appear to be necessarily connected with inflammation, and grow sometimes from the surface, at others from beneath the mucous membrane. In general they are fibrous, solid, not very vascular, and not attended by any peculiar symptoms.

6. *Softening of the Mucous Membrane.*—In this condition, if it be attempted to separate the mucous membrane, it immediately sloughs, and if lightly scratched by the nail or scalpel is raised in strips. When general, it is commonly the effect of acute, and when local, of chronic inflammation. A similar state succeeds to the occurrence of putrefaction, but not, however, until this has made considerable progress.

7. *Morbid Development of the Muciparous Glands.*—It sometimes happens that these organs are developed in an extraordinary degree, in so much as to occupy almost the whole extent of the mucous membrane. The cause of this development is not easily explained, as the surface on which they are seated presents none of the ordinary characters of inflammation. The only difference from the ordinary state of the parts consists in the increase of the number of glands, and in a very abundant secretion of mucus. In other instances, however, the connexion of the development of the muciparous glands, with the state of inflammation, is sufficiently evident. In this case, the surface of the intestines presents reddish elevations, succeeded by ulcers, most numerous in the vicinity of the valve of the ileum, and corresponding to the Peyerian glands. The first appearances of inflammation here consist in swelling and redness of the gland, with an inflammatory areola around its base; 2dly, the swelling increases, a white spot appears on the summit of the gland, which is sunken; 3dly, the bases of the tumour become enlarged, and produce a marked thickening of the mucous membrane; the top of the gland becomes the seat of an ulcer, with bleeding edges, and containing a clot of blood: the glands being most numerous in the ileo-cæcal region, cause a more considerable thickening of the mucous membrane in that part, which then also participates in the inflammation of the mucous apparatus. In the case of chronic inflammation, the muciparous glands may be considerably developed without redness or vascularity; they may become hard, scirrhus, or tubercular.

In this case, also, the ileo-cæcal region is the principal seat of disease, from which it extends to the surrounding parts.

#### CHANGES OF STRUCTURE, WITH LOSS OF SUBSTANCE.

1. *Ulceration of the Muciparous Glands.*—In the ulceration succeeding to acute inflammation, three stages are observed: in the first, the edges of the ulcer on the top of the gland are uneven, bloody, and lacerated, as already mentioned; in the second, the little cavity is enlarged, it has a foul appearance, contains a sanious matter, and gives to the gland the form of a truncated cone, with an inflammatory areola at its base; in the third, the ulcer has almost entirely removed all traces of the swelling on which it was originally seated; it is more or less extensive, and when its surface is cleaned, leaves the fibres of the muscular coat exposed; its edges are thick, red, and abrupt; the mucous membrane in the vicinity is swelled; the ulcers, when numerous, join by their lateral extension, and ultimately present large disorganized patches.

Chronic ulcers of the mucous glands are most commonly met with in those who perish from scrofula, phthisis, diseases of the joints, &c. Their appearance is totally distinct from that of ulcers following acute inflammation, and they are attended by totally different symptoms. The edges of such ulcers are white, firm, rounded, and turned inwards, whilst the base is grey, and filled by a soft inodorous substance of an ashy colour. The circumference is surrounded by a thickened fold of mucous membrane.

2. *Ulceration unconnected with the Mucous Glands.*—The mucous membrane is sometimes covered with small white granulations, having the consistence and appearance of plaster, yielding to the slightest pressure, generally accompanied by ulcers with hard, white, uneven edges. M. J. Cloquet has described a peculiar kind of ulceration of the mucous membrane, occurring without any evident redness or swelling. It is commonly found at the end of the ileum and in the cæcum. The edges of the ulcer are smooth and even, and generally marked by a fine grey or black line; the ulceration sometimes exposes the muscular coat, more commonly the serous, and it even occasionally happens that the whole thickness of the intestinal tube is perforated. In such instances, however, effusion is usually prevented by the attendant peritonitis and agglutination of the opposed serous surfaces.

Excoriations of the mucous membrane are among the products of acute inflammation. Their circumference is irregular, their surface red, and not concealed by a purulent fluid. They are comparatively rare, as the progress of disease soon causes

them to assume the appearance of ulcerations, which, however, in their early stages, present sufficient evidence of the mode in which they have been formed. When the ulceration is more advanced, the only assistance in forming a judgment as to the mode in which it originated, consists in a reference to the morbid appearances met with in the vicinity.

3. *Gangrene of the Mucous Membrane*.—This is to be distinguished from a similar affection of the intestinal parietes collectively. It occurs under the form of sloughs, or of gangrenous ulcers. The former may be caused either by common inflammation, or by the action of corrosive poisons. In chronic enteritis it is not very unusual to meet with small black or grey gangrenous spots, including the whole thickness of the mucous membrane, and, on their separation, giving origin to ulcers or perforations. At other times they are larger, but less numerous. In some cases, again, sloughs are found on the inner surface of the intestines, without any very evident marks of inflammation. When the slough appears to be the effect of inflammation, the ulcer succeeding to it presents its edges tumefied and red. In the opposite case they are grey, perpendicular, and without swelling.

4. *Complete Destruction of the Mucous Membrane*.—The mucous membrane is sometimes destroyed in a more or less considerable extent, in such a manner as to expose the fibres of the subjacent cellular, or even the muscular structure. M. Billard does not himself appear to have observed this lesion, which he quotes from Morgagni, and which he considers as the effect of a softening succeeding to chronic inflammation.

6. *Cicatrices of the Mucous Membrane*.—These are rarely observed, owing to a variety of circumstances, one of the chief of which consists in the incessant contact of the ulcerated surfaces with alimentary and fœcal matter. In a case, however, related by M. Billard, in which ulcers were found in different stages of their progress, some presented a small red spot in the middle of a granular surface, with numerous fine lines radiating to the centre of the cicatrix. The mucous membrane in this spot was a little thicker and of a more dense texture: it had lost the villous appearance of its surface, and the cicatrized part was somewhat depressed. Such cicatrices were irregularly dispersed among ulcers of the mucous membrane, in various stages of their progress.

The extent of our analysis has almost necessarily prevented us from quoting any of the cases which the author has adduced in illustration of the various morbid appearances he has described. It is unnecessary to say that his work is devoted solely to the

morbid anatomy of the gastro-intestinal mucous membrane, and that he has not attempted to trace the connexion of the appearances found after death with the symptoms existing during life. In this respect much remains to be done, but we are disposed to think that even from the imperfect outline we have given, our readers will have no difficulty in admitting, that the Treatise of M. Billard is one of considerable utility, and that it merits the consideration of those who are inclined to study accurately the diseases of one of the most extensive and important organs in the animal economy.

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ART. V. *Practical Commentaries on the present Knowledge and Treatment of Syphilis.* By RICHARD WELBANK. London: 1825. pp. xxv. 50.

WHATEVER improvement may have been made in the treatment of venereal diseases, it is impossible to imagine any thing more confused and imperfect than the ordinary theories proposed for the explanation of the various circumstances which relate to their production and progress. Author succeeds to author, each differing from the other, and each making the most confident appeals to experience.

In the midst of this confusion, the mind of every rational man must feel gratified in being able to rest on the few facts which have a real claim to be considered as the results of experience, and for which we are mainly indebted to the good sense of those who have the direction of the medical department of our armies. Such we consider to be the statements:—1st, That all venereal diseases may be cured without mercury;—2dly, That the mercurial treatment, though not essential to, is extremely serviceable in the cure of venereal diseases; and, 3dly, that there is not any fixed or absolute connexion between certain sets of primary and secondary symptoms.

However it may shock the prejudices of Mr. Hunter's admirers, we must be allowed to express the opinion that the influence his name has been permitted to exert over the discussions on this subject is but very little deserved; and has been in no small degree prejudicial to the advancement of science. Whatever may be his merits, as a physiologist and as a collector of facts, and they are doubtless great, Mr. Hunter was particularly and invariably unfortunate when he allowed himself to enter upon speculation. It is needless to point out all the instances

in which this was the case, a task most acrimoniously executed by those whom personal motives alone actuated, and who were totally incapable of comprehending or allowing all that was due to his extended genius and unceasing application. His work on the Venereal Disease is a striking instance of crude and unfounded speculations, intermixed with such descriptions as of themselves bear sufficient testimony to the accuracy with which he was capable of observing.

We have long entertained the opinion, and that not formed hastily, or without due investigation, that Mr. Hunter having commenced his investigations with the doctrine impressed on his mind of the existence of an individual venereal poison, regulated by fixed and precise laws, unconsciously allowed himself to view facts through a distorted medium, and having begun by adopting the hypothesis to assist or direct his researches, ended by modifying the results so as to accord with his preconceived doctrines. It is needless to say that in passing this judgment on him, we acquit him of every thing but the mistake to which we conceive him to have been peculiarly liable, and which it is, perhaps even now, not altogether useless to point out.

In proof of these assertions, it would be an easy task to bring a sufficient number of extracts from his own work to satisfy the most sceptical. But besides that such a proceeding would be at once invidious and tedious, there is another description of evidence which is more practical, and more likely to be generally convincing. A testimony of this kind may be found in the utter discordance of general observation and experience with the description which Mr. Hunter has given of the venereal disease. To have an adequate idea of the full value of this testimony, it should be recollected that it extends retrospectively to a period very little removed from that at which Mr. Hunter wrote. We believe that we are correct in stating, that a space of time not exceeding from ten to fifteen years intervened between the publication of the second edition of Mr. Hunter's Treatise, and the appearance of Mr. Abernethy's Observations on the Diseases resembling Syphilis; a work which, though probably written without any such intention, was the first to show how imperfectly Mr. Hunter's dogmata coincided with the occurrences which presented themselves to daily observation. It is interesting to observe the progress of Mr. Abernethy's experience on this subject. Commencing his own observations with an implicit belief in the correctness of Mr. Hunter's doctrines, he was yet too clear-sighted not to discover that a large proportion of the cases of common occurrence must, if measured by the standard of Mr. Hunter's principles, be considered as anomalous. And

here it deserves to be remarked; that a large proportion of the cases which Mr. Abernethy originally published as diseases *simulating* Syphilis, (the supposititious disease, created, if we may say so, by Mr. Hunter), had no claim to such a title; they differed in short from Mr. Hunter's description in every particular, of external characters, progress, and event. We say that this circumstance is important, because it serves to shew that Mr. Abernethy's judgment at that time was less accurate and discriminative than what would be expected from any writer at the present day. But if we look to Mr. Abernethy as he writes and speaks at present, we find him as fully aware of the necessity of precise and definite discrimination, as any of the numerous authors who have recently attracted public attention to this subject. It is not therefore at least a remarkable circumstance that we find him at this time declaring that he now no longer meets with forms of disease corresponding to the descriptions left by Mr. Hunter, and that such are now supplanted by the diseases named, or misnamed, pseudo-syphilitic! We are aware that Mr. Abernethy explains this change by the supposition that the Syphilis of Mr. Hunter has been extirpated, and that the irregular diseases, which had not escaped the attention of Mr. Hunter, have now become, in a corresponding degree, more common.

We, on the other hand, as may be supposed from what we have already said, view the matter in a totally different light. We are not acquainted with any thing analogous to the changes thus suggested, and we are unwilling to admit the possibility of so complete a metamorphosis or extinction of a specific disease on such inadequate evidence. We think that there is at least as much probability that Mr. Hunter should have committed an error, in attempting to reduce to a fixed and invariable standard a disease, or a collection of diseases, exposed to infinite modifications from a variety of sources, as that a change should have occurred so unexampled and so completely opposed to analogy. In short, we believe that the doctrines may be different, but that the facts always remain the same. We have laid much stress on the evidence to be deduced from Mr. Abernethy's writings, not only because of the merit to which he is so justly entitled, for having opened the door to the active inquiries now carrying on, but also because it serves to connect what we ourselves witness at the present day, with what we have every reason to believe took place at the time Mr. Hunter wrote. Mr. Abernethy is by no means the only writer whom we might quote to prove that Mr. Hunter's picture of the venereal disease, as it then existed, was incorrect. We may mention Mr. Carmichael

as another instance; and, in proportion as surgeons learn to observe and accurately discriminate the various forms of disease, precisely in the same proportion do they cease to meet with anything corresponding to the Hunterian disease; a tolerably decisive proof that it is a nonentity.

Supposing then for a moment that the Hunterian disease no longer existed, it will be asked, what is it then that is now met with? This is a natural question, but one which, in the present state of our knowledge, we think it quite impossible precisely to answer. It is in fact the point now under investigation, and for the perfect decision of which it is essential that men's minds should be freed from the influence which great names are too apt to exert, and directed exclusively to the conclusions to be derived from the facts which present themselves.

The prevalent opinions respecting venereal diseases in this country may be arranged under three heads:—first, that which, because it saves trouble and the necessity of thought, is embraced by a great majority, viz., that syphilis now exists as in the time of Mr. Hunter, and that mercury is indispensable, or nearly so, for its cure. Secondly, that of Mr. Abernethy and his followers; viz., that besides a few cases of syphilis, the remaining large share are anomalous diseases, arising from morbid secretions, producing infinitely various effects according to the peculiarities of the constitutions of individuals, and not regulated by any general or definite laws. Thirdly, that of Mr. Carmichael, who labours to prove that the various forms of venereal disease arise from a certain number of distinct morbid poisons, of which the syphilitic is one, each regulated by laws peculiar to itself, and characterized by a fixed train of primary and secondary symptoms. It must be unnecessary to say, that these are only a few, and the principal, of the opinions entertained; for every one must be aware, and there is no disgrace in avowing it, that nothing on the subject is so far fixed as to be uniformly or even generally assented to. For ourselves, it is enough to declare, that excepting the phantom syphilis, we are inclined, as far as a limited experience permits, to agree with most of the doctrines advanced by Mr. Abernethy.

We have left ourselves but little space to mention Mr. Welbank's Commentaries, a title which would appear to promise more than could possibly be accomplished within the very narrow limits to which he has thought proper to confine himself. He appears, like Mr. Carmichael, to believe in the existence of several distinct venereal poisons, although from the manner in which he expresses himself, it is obvious that he thinks the Hunterian disease of much more frequent occurrence than



would be admitted even by the majority of those who profess a belief in its existence. We have no intention of blaming Mr. Welbank for having failed in adding any thing to our knowledge of the subject he has treated ; for we are well aware that there are very few whose opportunities are of such a kind, (we do not mean extent), as to enable them to advance much in which we should be inclined to place any considerable degree of confidence. This being the case, however, we cannot but think that all that he has now laid before the public might have appeared with at least equal advantage in a somewhat less assuming form. As to the coloured illustrations that he has annexed, it would be unfair to say a word, as he has himself most candidly admitted their imperfections.

It gratifies us to find Mr. Welbank adding his approbation to the plan of treatment now generally adopted in venereal diseases, which may be called a moderate mercurial one. It is at once curious and satisfactory that all—"docti, indocti pariterque"—should agree in this most important particular, whilst on every other topic connected with the subject, the differences of opinion are endless and apparently insuperable. We give the following extracts as a specimen of the work :—

"*Diagnosis of Chancre.*—The history and progress of diseases, furnish the best diagnostic collectively ; but there are three forms of ulceration which might be confounded with chancre in appearance. These are the Venerola Vulgaris, the Venerola Indurata, and Phlegmon ; or I would rather say, Furunculus of the Penis. For a full description of these, it affords me pleasure to refer the reader to Mr. Evans' work. The venerola vulgaris may be readily distinguished by its history and progress, could we ascertain them, but the opportunity of awaiting the one will seldom be allowed, and the other can be little relied on from a patient's report. Under these circumstances, one observation has occurred to me of practical utility, which is the difference of edge in the venerola vulgaris and chancre of the glans, which form alone of syphilis there is a likelihood of mistaking for venerola. The second stage of venerola, is marked by its regularly ulcerative character, for a varying period of days or weeks. This ulcerative stage (which is also more rapid than syphilis) is not only characteristic of the sore generally, but of the very parts of the sore. Thus the edge will continue in its ulcerative stage, when processes of reparation are visible in the centre. At no period of venerola vulgaris, at which its surface resembles chancre, shall we fail to find the sharp, loose, and undermined edge which is not observed in chancre. The venerola indurata is very difficult of distinction. Its appearance at first raw and ragged, its slightly excavated surface, its continuous and obtuse edge, its very frequent situation in the fossa of the corona glandis, and its induration, often render it amply dubious. In general, however, it is more sudden, more inflammatory,

has a sodden shreddy surface, secretions of more offensive odour, sometimes mottled and dark points at its circumference, threatening extension. It is circumscribed by marbly induration, in shape and size like the cup of a small acorn, and produces darting pains, and not unfrequently is attended by febrile inflammatory pulse. The diagnosis of phlegmon or furunculus is easy, particularly at early periods. The vestiges of numerous points of ulceration, partial mortification of points of the skin, undermined and jagged edges, more diffused inflammatory areola, and more diffused induration, greater degree of pain, and the previous formation of matter may be observed. The whole processes of the disease are more active than those of syphilis, and there is but a slight resemblance in appearance, that can confound it with chancre of the external integuments."

"*Iritis*.—It appears difficult to establish any accurate diagnosis between the syphilitic, pseudo-syphilitic, and simple inflammation of the iris. It will be sufficient for the purpose of the present observations, to describe those characteristics which mark the syphilitic iritis. It ordinarily attacks one eye first. Its early stages, like those of other forms of syphilis, are for the most part indolent for a short period, are seldom attended with much intolerance of light, and are often for many days neglected by the patient. Its insidious progress, however, is soon productive of a turbid state of the aqueous humour, and a consequently misty state of vision. Even at this period, patients are sometimes scarcely conscious of a very impaired state of vision in the diseased organ, till they are directed to close the other eye. Examination and comparison of both eyes shew a discoloured state of iris in the eye affected with syphilitic inflammation, dullness or irritability of action on exposure to light or shade, thickening of its pupillar margin, and sometimes irregularity of its circular edge from adhesions. More frequently there is displacement, or drawing up of the pupillar margin of the iris towards its upper and inner, or nasal side. As the inflammatory action is developed, there is a dense zone of small vessels, closely arranged up to the edge of the cornea, and deepest in colour at this part. The hue of the whole is of a deep and tawny crimson. Granules of lymph are sometimes visible, at the edge or other parts of the Iris, and bottom of the anterior chamber, where there is generally a reddish, misty, inflammation of the lining membrane of the cornea. There is often intense and agonizing nocturnal pain, mitigated, and even disappearing towards morning, but frequently of a far more severe character than would be imagined from the mere inflammatory appearances of the eye during the day. Suppuration and abscess are described as the disorganizing terminations of this disease. I have had no opportunity of noting them, but have in three instances been struck with the following appearances, not resulting, as I believe, from suppuration. They were advanced stages of iritis, improperly or inadequately treated. On the external side of the diseased eye, and at the ciliary ligament, there was visible a dark-brown elevation, which exhibited its distinct tamarind-stone colour, through the red conjunctiva above it. Its form was tri-

angular, with its base towards the cornea, and about the size of a pea. The appearance in every instance, at once suggested the idea of a projection of the choroid coat, through a fissure of the sclerotic. The plane of the iris, moreover, was in one instance inclined obliquely backwards, towards the part of the sclerotic, which had apparently allowed the protrusion of the tumour. The whole mischief rapidly recedes on the excitation of mercurial action. Iritis is found to be a more frequent attendant of pseudo-syphilis than syphilis; of papular and pustular, than scaly eruptions. Mr. Carmichael's testimony is strongly affirmative of this fact; but I should have no hesitation in asserting, that iritis sometimes attends the scaly eruption, either with or without other evidences of syphilis, having myself seen several instances, and one very recently."

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ART. VI.—*Elements of Operative Midwifery, comprising a Description of certain New and Improved Powers for assisting Difficult and Dangerous Labours.* By D. D. DAVIS, M.D. &c. &c. 4to. with plates. London, 1825.

[This Review is by an intelligent Correspondent.]

WE are not of the number of those who think that a practical knowledge of midwifery can be obtained with little study, and that the duties of the accoucheur can be performed with slight care. Natural and healthful as the act of parturition in general is, the occasional derangements of that function are among the most serious calamities to which any part of the animal economy is subject; and the treatment of those derangements requires, to say the least, as great a degree of knowledge, discrimination, promptitude, and dexterity, as any operation in the whole range of surgery. In general, every thing goes on well; so well, indeed, that the assistance of a medical attendant is not in the slightest degree needed: but, now and then, cases occur of the utmost danger and difficulty; and nothing can save the patient from certain death but the most exact knowledge combined with great manual dexterity. No woman can tell that the rarest case of difficulty and danger is not destined to be her own: therefore she secures the attendance of a medical practitioner, although she well knows, that in ordinary circumstances, the service which he can afford her is sufficiently slight. No practitioner can tell in any single case to which he may be summoned, that it will not prove to be one of those rare cases of difficulty and danger, to meet which, if it unhappily occurs, is in fact the very reason why he is employed at all.

For him, therefore, to neglect the study of midwifery, because the ordinary cases which occur in the course of practice are without danger; for him to neglect to prepare for the attendance on difficult cases, because they but rarely occur, is to violate the obligation into which he enters with his patient, precisely on that very point, to which it is universally understood that he stands pledged. Among all the cases of moral delinquency that can be conceived, we are unable to fix upon any, which is more base, more abandoned, than this, whether we consider the confidence which is abused, or the extent of the evil which results from that abuse.

Dr. Davis has disclosed, or rather has directed the attention of the profession to some facts relative to this subject, which are well calculated to excite indignation. That gentleman has been engaged many years in teaching the practice of midwifery. He has thus become well acquainted with the prevalent mode of thinking and acting on this subject among the various classes, and the profession at large, and it is natural to suppose that his attention must have been particularly directed to it. It is natural too, that his indignation should scarcely know any bounds, when he considers the unprincipled language which some medical practitioners hold on this subject, and the vicious counsel which they give the uninstructed student. But the most extraordinary thing is the cool indifference which the Censors, whose office it is to examine the qualifications of candidates for surgical diplomas, &c. manifest on this subject. No certificate of having attended even a single course of Lectures on Midwifery is required from the candidate for a diploma, either at Apothecaries' Hall, or the College of Surgeons, in London. When the candidate, who, if he obtain his diploma, is authorized to practice on any, or all the branches of the medical profession, presents himself before the examiners, he is asked no one question on the subject of midwifery. The consequence is what might have been anticipated—that a great number of students never attend even a single course of lectures on this subject, and therefore enter into the practice of that part of their profession miserably ignorant. The student is not to blame; he is often at this period too young to consider the value of knowledge. Those are to blame, with whom the regulation of these matters rest. Either there is something to be learned in this art, or there is nothing. If there be nothing, the question is at rest: but if there be any thing which we can learn, it is the imperative duty of the College of Surgeons, and of Apothecaries' Hall, to take the same measures to secure attention to it, which they find requisite with regard to every other branch of the pro-

cession. We make this appeal to them, in the earnest hope, that they will hear and attend to our remonstrance. We shall be extremely reluctant to appeal from them to the public; but unless the flagrant abuse which at present prevails with regard to this subject is rectified, we shall probably make that appeal; and do what in us lies, to enable the husband and the wife to comprehend something of the kind of difficulties which are likely to happen, and to explain to them some facts, which will afford them the means of calculating the chance they have of finding in ordinary practitioners, persons qualified to encounter such difficulties. The College of Surgeons in Edinburgh does require certificates of attendance on this branch of the art, before the candidate is admitted to examination. Recently, the University of Edinburgh has required it, even from graduates. We trust these examples will not be lost on the Surgeons' and Apothecaries' Halls in London.

We have spoken of cases of difficulty and danger. It is with reference to these that the student requires instruction; it is in these that artificial aid is requisite: it is for the safe conduct of these that instruments are necessary, and that it is indispensable to educate the hand to use them. It is scarcely possible to conceive how a man can confer greater benefit on the obstetric art, than,

1st. By stating the exact circumstances in which, and in which only, instruments are necessary.

2d. By pointing out the exact instruments which are best adapted to each particular case.

3d. By teaching the hand to acquire dexterity, and delicacy in the use of it, and,

Lastly, By so modifying the instruments in common use, or by contriving new instruments, where new instruments are necessary, as to render them well adapted to accomplish the end required.

Now these are precisely the objects to which Dr. Davis has devoted many years of his life. The public institutions, to which he either has been, or continues to be attached, have afforded him the means of accomplishing the former, and the mechanical talent which he possesses, has enabled him to attempt the latter with some prospect of success and advantage. It is the opinion of those who are best qualified to judge, that he has succeeded in both. At the same time he has manifested sound judgment in a person so endowed, in not unduly estimating the value of those contrivances. He has rather, indeed, made his mechanical talent subservient to the art, than art the means of displaying his mechanical talents. He reprobates in the strongest

He reprobates in the strongest language the use of instruments, except in those cases, in which they are indispensable. He teaches, with all the zeal of a true believer in the wisdom of Nature, that she is to be allowed to do her own work in her own way, excepting when some obstacle impedes her progress. He maintains, that then, and only then, it is the duty of art to interfere. This is exactly one of those subjects, which put to the test the character of a man's mind. A well constituted mind, enlightened by a knowledge of its subject, is neither a blind idolator of nature, afraid to offer his assistance lest he should commit an injury, nor a bold intermeddler, who retards what he endeavours to hasten, and destroys what he aims to perfect. "*In medio tutissimus ibis*," is the maxim which a sound judgment illustrates, in every decision which it forms relative to such a subject, and the uniform adherence of Dr. Davis to this maxim, in the doctrines he teaches, and the counsels he gives, are such as cannot fail to secure him the confidence of competent judges.

*Of the use of Obstetric Instruments.*—In a large proportion of cases of child-bearing, as we have already stated, the natural efforts of the mother are sufficient to accomplish the delivery. Exceptions to this rule, however, are by no means uncommon, and hence arises the necessity for the interference of art, to accomplish what Nature, unassisted, is unable to effect. It is the *summum usque* of instrumental midwifery to preserve the lives both of the mother and the child. But in some unfortunate cases the difficulties are so great as to require the sacrifice of one life. It is the life of the mother which in such cases must, if possible, be saved. Hence obstetric instruments, as Dr. Davis observes, have usually been distributed into two principal classes; the first consisting of two or three varieties of power, but possessing in common the competency of being used compatibly with the salvation both of the mother and her offspring; and the second, including all cutting instruments, and such as may be required to be made use of as auxiliary to cutting instruments; and therefore, whenever unhappily resorted to, necessarily implicating either the certain destruction of life, as in Embryotomy; or much risk of it, as in the case of the Cæsarean Section.

*Modern Obstetric Forceps.*—Our limits prevent our giving a history of all the different kinds of forceps which have been at various times invented and employed by British and Continental practitioners.

Those of our readers who are anxious to be acquainted with this department of obstetrics we recommend to peruse the

book itself, where they will find a satisfactory examination of the merits and demerits of the various kinds of forceps which have been successfully introduced to the notice of the profession, more especially in this country. There can be no question as to the superiority of British instruments of this class as improved by Smellie, Osborn, and Haighton, over the French forceps.

After some remarks on these instruments Dr. Davis proceeds to give a description of his own common forceps, which in justice to the superiority which it claims, we shall present to our readers in the author's own words.

"The instrument to be now described, while it presents, perhaps, the features of a more decided family resemblance to the common English forceps, will, nevertheless, be found to embrace some of the better properties of those of France and Germany. The length of this entire instrument is between eleven inches and a half, and twelve inches and a half, English measure; the difference to depend on the discretion of the possessor as to the length of the handles. The length of the blades, from the commencement of their separation at their shanks, to their respective points, the line of measure being taken between, and equidistantly from each, is about six inches and a half, or six inches and five-eighths. The length of their shanks, from the commencement of their separation to their point of crossing each other at the lock, is one inch and three-eighths; and the length of the handles, including the lock, is about four inches and a half.

"The weight of a well made pair of forceps of this construction should not exceed thirteen ounces and a half; the excess, over the weight respectively of those of Denman and Osborn, depending upon the greater length and strength of the shanks. It will be observed that the blades are much broader than those of any other English forceps, with the exception of Haighton's; and, as far as I know, of any other Foreign specimens without exception. Without, however, the amount of width here given to the fenestræ, viz. one inch and a half at their widest part; they will not be competent to receive any useful portion of the foetal head, notwithstanding the assertions so universally made by authors to the contrary. Let any gentleman apply Denman's or Osborn's forceps to regularly formed foetal heads, or to skeleton heads without being distorted in the preparation, and he will be immediately convinced of the correctness of this statement. Not only are the blades of this instrument broad and fenestrated like Haighton's, but they are much more hollowed out interiorly than those of any other forceps that I have ever seen; so as to be adapted to lie in close contact to every part of the child's head to which they are applied, and to admit of the reception and firm purchase of extensive portions of its lateral parietes.

"The foetal head being somewhat differently curved at different parts of its surface, I have attempted to dispose of the curvature of

different parts of the blades of the instrument accordingly, so as to insure as much as possible equal contact and equal pressure upon all parts of the head where the fangs, or frames of the fenestræ ought to be in opposition with it. An obvious effect of this mechanism of the blades is a prodigious increment of strength which they acquire compatibly with very small dimensions, both as to the breadth and thickness of their fangs. This peculiar structure was suggested by repeated applications, and careful fittings, of several varieties of forceps to the heads of newborn children.

From the actual width of the fenestræ, and narrowness of the fangs surrounding them, the more prominent parts of the head are allowed to escape through these apertures to some distance, and, indeed, (notwithstanding the presence of the instrument,) into full contact with considerable tracts of the vaginal parietes.

"It being occasionally necessary that the child's head should be subjected to some compression, that effect is sufficiently provided for by an adequate strength given to the shanks and the metallic parts of the handles; as also to the posterior portions of the fangs; but these latter are gradually made thinner as they advance forward, so that towards the middle of the blade they do not exceed in thickness one-twelfth part of an inch. This instrument, in common with Osborn's, adopts the curve in the direction of the edges of the blades, as suggested by Levret. In four out of five cases of operations with the forceps, this peculiar form of the instrument entitles it to great preference over the single-curved forceps of Denman and Haighton: whereas, for the remaining cases, viz. those having the foetal face directed to either side of the pelvis, I have provided a pair of forceps, perfectly new in its principle."

Under this head of instruments, the author has given several varieties of forceps, by adapting counterparts, having narrow blades, to others with broad blades; and other counterparts of the usual length, to antagonists of very short dimensions. These different varieties of the instrument are intended to obviate difficulties arising from malposition of the foetal head in the pelvis, viz. positions with the face directed to the right and left sides of the pelvis respectively, and to assist cases of tedious labours from feeble or suspended uterine action; as also that peculiar complication of labour depending upon the presentations of the umbilical cord. Of these several varieties of the forceps, we consider the specimens represented in plates 7 and 8, as at once the most remarkable for their novelty and practical importance.

"This instrument consists of two blades of unequal length, and so curved as to fit accurately to a foetal head of ordinary size, when applied respectively, the one over the superior portions of the parietal and frontal surfaces of its right side, and including the greatest part of the right cheek, and the other immediately behind the left ear. To accomplish this intention the short bladed branch of the instrument is to be



introduced into the left sacro-iliac district of the pelvis, and applied to the latero-occipital portion of the head, i. e. the part immediately behind the left ear, which will be found to correspond with the left sacro-iliac junction of the pelvis.

"The long blade is then to be passed up along the right lateral and anterior region of the pelvis, and so applied as to include within its fenestra a portion of the right cheek, and a considerable tract of surface situated above and anteriorly to the right ear. The blades are then to be so adjusted that the short one shall act as a fulcrum, and also in some degree as an antagonist to the other, and to admit of easy adjustment at the lock. The instrument being supposed to be properly applied and adjusted, a gentle rotatory movement of the head is then to be effected from left to right, so as to bring the occipito-vertical part of the head into the arch of the pubes, and to carry the face into the hollow of the sacrum. The reader may easily understand, that with an instrument of this construction, the change in the position of the head may in all cases admitting of relief by the forceps, be readily effected, without exposing the parts, either within or at the outlet of the pelvis, to any risk of injury from severe pressure. It is evident that no part of the short blade can come into contact either with the neck of the bladder or the urethra, a circumstance which of itself might be deemed sufficient to decide the superiority of this instrument, for the special purpose here to be effected, over every other specimen of forceps that has been hitherto proposed. The outlines of a similar instrument, as given in plate 8, are intended to represent a pair of forceps of precisely the same properties as the foregoing, only reversed as to the direction of its curves and twists, because of its being adapted to apply to the foetal head when the face is directed to the left side, and to change the position of the face from that side to the hollow of the sacrum."

The next part of our author's subject is one of much practical value—"on the circumstances indicating the use of the forceps;" and as we conceive the subject to be ably handled, we shall give a detailed account of his views.

1st. "*Of exhaustion of the natural powers concerned in the function of parturition, as an indication for the use of instruments.*"

—In our author's opinion, the term exhaustion, as applied to cases of tedious or laborious parturition, is frequently misapplied; this unfortunate accompaniment being often suspected by anxious attendants when there is no ground whatever for such apprehensions.

Hence the propriety of the practitioner's inquiring minutely into all the collateral circumstances of the patient's condition, previously to his forming his opinion as to whether the powers are, or are not, exhausted. A question of some importance here arises, viz. at what time does exhaustion occur after the commencement of labour. Dr. Davis states, that he never met with a case in which exhaustion occurred within twenty-four hours

from the commencement of true labour pains. Failure of the natural powers, demanding a variety of measures for its relief, may occur long before the period stated; but the exhaustion here alluded to, is presumed to arise from failure of the powers consequent upon their previous and excessive exertion. Dr. Davis does not think that there can be any loss of balance between the uterine efforts and general constitutional powers; but that the former participates in its expenditure, and harmonizes in its issues, with the latter. In this opinion we scarcely agree with the experienced author; conceiving that the muscular contractions of the uterus may become insufficient, (as in cases of temporary obstacles to the completion of the labour, from excessive rigidity of the soft parts, local and organic diseases, &c.) while the constitutional powers remain in a state of comparative vigour. This reasoning does not of course apply to those unfortunate cases which are complicated with defective capacity of the pelvis.

2d. *"Of deficient action of the organs of parturition on account of disease, as an indication for the use of instruments."*—

Under this section are included some varieties of organic disease, such as a schirrous condition of the uterus, diseases affecting the contiguous organs, anomalous tumours obstructing the progress of the birth, and cases of diseased bladder, rendering the parturient efforts less availing from the presumed influence of their local irritation. Over-distention of the uterus from an excessive quantity of liquor amnii, which our author thinks is generally accompanied by diseased states, either of the uterus or of its foetal contents, is also noticed as a cause of defective uterine power.

On the discharge of the redundant fluid, however, the parturient powers are renewed, and generally prove sufficient to accomplish the delivery. Some instances, however, are related, in which the dormant powers have not been roused; and it has been found necessary to have recourse to instrumental aid to complete the delivery of the patient. In this section Dr. Davis has given several very interesting examples in illustration of his principles, which are worthy of the reader's perusal and study.

3d. *"Of over-distention of the uterus, from plurality of children, as an indication for the use of instruments."*—

"Under proper management of the constitutional powers, twin births are for the most part very safely accomplished without the assistance of instruments.

"On the other hand, cases of difficulty from this cause admit of a very beneficial extension of artificial aid, at less expence of risk from

its application than almost any other. The children of twin births are generally under the full size, and therefore more easily withdrawn through a passage of ordinary dimensions, and of course with less chance of injury to the important structures within, and at the outlet of the pelvis.

"The soft parts, which are most liable to contusion in these cases—not from instruments, indeed—but from the operation of the natural agents of parturition, are generally those which are attached to, or situated in the immediate neighbourhood of the brim of the pelvis. In one of our indications for the use of the forceps, it was stated that head presentations are generally considered in this country, and in my opinion properly, as the exclusive objects of treatment by this class of instruments. The principle must be fully recognized in its application to twin births.

"The general indication for an eventual appeal to this variety of artificial power must, of course, in this, as in all other cases, have a direct reference to its positive expediency. The elements of a proper estimate of such expediency will be found in a due consideration of the conditions of the soft parts, as to dilatation, irritation, and threatened danger of contusion or laceration: that of accessibleness of the foetal head or heads; the duration and actual character of the inertia, or incompetent action of the uterus; the state of the constitutional powers, and the occurrence of dangerous incidents to complicate the labour."—p. 74.

4th. "*Of deficient action of the uterus from no obvious cause.*—Two substances are brought before the notice of the reader, as having been supposed to possess the power of quickening the pains of parturition. These are the borate of soda and the ergot of rye, *secale cornutum*; the former in doses of five and six grains every half hour. Dr. Davis ridicules the idea of this substance possessing any power over the progress of labour whatever. He has given it a trial in three or four cases, without noticing the slightest benefit from its use. The ergot of rye has had, at various times, warm advocates. Our Transatlantic brethren, especially, have sounded its praises in cases of diminished action of the uterus. In concluding his observations, Dr. Davis remarks, that "the pretensions of the *secale cornutum* have been generally known to the profession for a period of nearly twenty years, and yet the actual fact of its power has not been satisfactorily established, nor is there evidence of its having, in a single instance, superseded the necessity of using the forceps."

5th. "*Of deficient action of the uterus on account of general constitutional weakness.*"—When the general constitutional powers are reduced from previous derangement of the health, from flooding, long continued vomiting, deficient nourishment, or any other cause capable of producing general debility, the

uterine efforts become liable to be proportionately enfeebled. In such cases, remedies, properly and promptly administered, may often obviate the necessity of instrumental aid. The reader can never be too familiar with the golden rule which closes this section, and which prescribes, that "the forceps cannot be had recourse to with propriety, excepting on the principle of our first and most important indication for the use of instruments, viz. a well ascertained insufficiency of the natural powers to accomplish the act of parturition, with safety to the lives and structures interested in the process."—p. 81.

6th. "*Of the influence of diseases, or the results of diseased states of distant organs, as causes of deficient action of the uterus.*"—Our author first treats of the complication of ascites.

"It is obvious," he states, "that ascites may have an unfavourable influence on the latter function in particular," (that of parturition) "both constitutionally, by occasioning a diminution of the general powers of the system, and also locally and mechanically, by impeding and otherwise impairing the actions of the abdominal muscles, and those of the other organs more immediately concerned in the process of child-birth. [It frequently indeed happens in counteraction of these causes of difficulty, that the ordinary resisting influences are proportionally reduced in power. Nevertheless, examples do occasionally present themselves, of so great a distention of the parietes of the abdominal cavity, added to a state of extreme constitutional weakness, as shall reduce the power of the usual agents of parturition to a state of total incompetency for the accomplishment of the delivery, without the assistance of art. The indication for artificial aid will of course result from a careful and deliberate estimate of the general circumstances here adverted to; and that for the use of the forceps in particular, from some additional considerations, having reference to the stage of the labour, the amount of dilatation of the orifice of the uterus, and the suitability of the presentation for that species of assistance.]"

Diseases of the lungs are next noticed. Asthma may be so urgent as to disturb the function of labour by impeding the pulmonary circulation, and thus diminishing the powers of the system. In such cases, the early stage of labour is generally impeded; whereas, the natural powers are, for the most part, fully adequate to accomplish the act of parturition, after the orifice of the uterus shall have become sufficiently developed.

"In some few cases of labours complicated with asthma," it is stated by the author, that "so much of the strength of the patient shall be expended during the earlier stages of the process that her powers may fail, or experience a dangerous subsidence before its final accomplishment. I do not, however, remember that I have ever been witness to more than one case of this description (the difficulty depending exclusively on

the cause here supposed) where artificial delivery by the forceps presented itself as an imperative indication."

*Emphysema*.—Dr. Davis has witnessed four cases of Emphysema, from the rupture of the bronchial structure of the lungs during labour. Copious blood-letting was resorted to with most decided advantage. Three of the patients were delivered without mechanical assistance. In the fourth, the forceps was introduced to improve the position of the foetal head, and then withdrawn. All the children were born alive. The mothers recovered perfectly satisfactorily without adopting the practice of Dr. Balfour, that of puncturing the integuments, as published in the *Edinburgh Medical and Surgical Journal*, Vol. 7. p. 174.

7. "*Of difficult Parturition from rigidity and other unfavourable states of the orifice of the Uterus*."—Dr. Davis very properly condemns the practice of indiscriminately having recourse to artificial dilatation of the os uteri by the fingers. In one case in which a dilating pressure had been applied to the orifice of the uterus, a profuse and fatal hæmorrhage took place on the third day after the delivery.

On dissection, the whole circumference of the orifice of the uterus was found in a gangrenous state; except at one part, where a portion of slough had fallen off, and left behind it a raw carneous surface, on which were seen to open several branches of arterial vessels, and one more especially, of considerable diameter. These vessels were exclusively the source of the hæmorrhage.

After admitting the practicability of the artificial dilatation of the orifice of the uterus, in many cases, without bad consequences, our author is nevertheless "not disposed to become a sanctioning party to its frequent and indiscriminate adoption, nor to its re-admission into general professional favour as an everyday rule of the art."

*Blood-letting*.—This, in all cases of extreme rigidity of the parturient passages, is a practice attended with the most decidedly beneficial results; more especially when there is inordinate vascular excitement.

The late Dr. Rush advised large bleeding as a means of lessening the pains of parturition. On this point Dr. Davis remarks:—

"For my own part I can see no good reason for bleeding prospectively, or in anticipation of a mere possibility, which might or might not be realized by the event. To say the least of such a practice, it would appear to be a most unnecessary encroachment upon the ordinary dis-

positions of nature in the affairs of a function which she usually performs very safely and satisfactorily without any such interference.

"Bleeding, on the other hand, as a remedy, or a corrective of an actually existing rigidity of the soft parts, whether or not accompanied by more than ordinary constitutional excitement, is a power of great and unquestionable value; and we are indebted to our Transatlantic brethren for much useful discussion of the subject, and more especially for pioneering us through a wilderness of prejudices into a just estimate of the extent to which, in certain imperious circumstances, it may be safely carried."

In some cases the indisposition to dilate has seemed to be confined to one particular portion or locality of the structure implicated. In illustration of this fact, our author refers to a very remarkable example, published in the *Bulletins of the Faculty of Medicine at Paris*, for 1818. Dr. Davis next adverts to cases of coherence of labia-uteri from disease; adventitious membranes, or other morbid structure: and then directs the proper mode of removing such impediments.

Rules are given, in the sequel, for the application of the forceps, and other instruments, in cases of rigidity, small capacity, and other unfavourable states of the orifice of the uterus.

8. "*Of difficult labours from malformations and other unfavourable conditions of the Vagina and Os externum.*"—In this section, difficulties during labour, from contracted vagina, adhesions from septafræna, and cicatrices, are treated of, and the method of remedying these impediments pointed out.

References are also given to cases which we are sure the practitioner of midwifery will peruse with interest.

9. "*Of defective capacity of the parturient passage, from the presence of tumours within the Pelvis.*"—These tumours are divided into three classes; first, those arising from the orifice of the uterus and internal surface of the vagina; secondly, tumours connected with the structure of the organs themselves, and thirdly, tumours within the pelvis, but external to the vaginal and uterine parietes.

The first class includes polypi, which in general are easily removed. Of the second class, examples occur very rarely. Our author states that he has never met with a single instance of them in his own practice. The third class includes various kinds of morbid structures, but chiefly of enlarged ovaries. Encysted dropsy of the ovaries comes under this latter class; in some instances of which agglutination of the inferior surface of the tumour by adhesive inflammation to the posterior chamber of the pelvis takes place, and proves an impediment to the passage of the child.

"In cases of moderate reduction of space within the pelvis, from the

cause here supposed, there certainly can be no doubt as to the occasional expediency of having recourse to the use of the forceps, to shorten the duration of labours which might otherwise become dangerous both to mother and child. In the application, however, of such powers, in such circumstances, I think it very important to observe, that the operator should have an ample choice of instruments of this class, as well as a most perfect dexterity in the use of them."

In those unfortunate examples of ovarian disease in which, from the large bulk of the tumour, it would be impracticable to deliver with the forceps, three or four modes of relief have been suggested; viz., the Cæsarean section; embryotomy; incision of the tumour, so as to empty its contents; and extirpation of the ovary. By the first, the life of the mother being so endangered as to render the success of the operation nearly impossible, there can be no question of the expediency of abandoning it, if the child can be extracted by embryulcia; which in general is attended with little hazard to the life of the mother. Hence its claim to preference. Puncturing the cyst, with the view of evacuating the contents of the tumour, has been repeatedly practised. Dr. Davis's practical suggestions are well worthy of the reader's attentive perusal. After these practical hints, another class of tumours is presented to the reader's notice; viz., tumours extra-abdominal, as well as extra-vaginal, situated within the pelvis, but not within the peritoneal cavity. A case is quoted, in which Dr. Drew successfully extirpated a tumour growing from the right side of the pelvis, but in fact occupying the whole of its cavity; so as to admit of only one finger being passed up between it and the pubes. The patient was delivered immediately after, and she ultimately recovered without any untoward symptoms.

*Hernia of the bladder* sometimes occurs as a complication of labour. The proper treatment in all these cases is obviously to empty the bladder from time to time, during the labour, so as to keep down the bulk of its hernial tumour as much as possible. But should that object not be sufficiently attained, it would eventually become the duty of the practitioner to deliberate upon the choice of ulterior measures. Should the tumour be of a moderate size, he might perhaps be able to effect the delivery by means of a cautious and a very gentle use of the forceps.

Availing himself of a suitable modification of that instrument, he might possibly be able to obtain a sufficiently firm purchase of the foetal head, and at the same time to avoid any direct and forcible application of pressure on the obstructing tumour.

Over distention, with or without displacement of the bladder,

may prove a source of impediment to labour. The diagnosis in the former of these cases is very important.

The introduction of the catheter, so as to evacuate the urine, will materially assist the judgment of the practitioner; as the whole of the tumour will subside upon the discharge of the urine, and the catheter will be distinctly felt along its whole extent, passing by the side of the vagina, and running from before backwards in a horizontal position; and it will generally be found with its concavity downwards.

The sections 10 and 11 treat of defective capacity of the female pelvis, and of the degree of confinement of the pelvis admitting of the safe use of the forceps. The contents of these sections are entirely practical, but are such as scarcely to admit of being analysed.

In section 12 the author treats "of arterial and constitutional excitement during labour." Laborious parturition is always attended with vascular excitement, the degree of which depends on various collateral circumstances, such as the state of the circulation before the commencement of labour, the general constitution of the female, whether of a plethoric habit or not, as it is found by experience, that vigorous pain, in rapid succession, generally produce more or less vascular action, which subsides when the labour terminates, without hazard to the safety of the patient, the progress being only disproportional to the activity of the exertions made. Should, however, the female under such circumstances, have formerly been the subject of acute visceral disease, we are to be more on our guard to keep the circulation within such limits as the circumstances of the case may demand. Of the organs most endangered from too great vascular excitement, the brain unquestionably is liable to suffer.

"Delirium supervening during labour is always an alarming symptom, and therefore can never be too soon recognised, nor too promptly removed. It is an evidence at once of great constitutional distress from extreme severity of suffering, and of a state of more than ordinary excitement and fulness of the blood-vessels of the head, indicative of a dangerous tendency to convulsions. The use of the forceps in these cases can never be proposed as a safe first measure; and indeed the very attempt to apply such an instrument in such circumstances, without a previous abstraction of blood upon a suitably effective scale, might be attended with a prodigious increase of danger. On the contrary, the first important measure to be had recourse to, both for the prevention and subduction of delirium during labour, (unless indeed it might be the muttering delirium of the moribund state,) is undoubtedly that of free venesection. Bleeding, to the extent of between twenty and thirty ounces, according to the special exigency of the case, may thus operate not only as a means of present safety to the afflicted patient,



but also become subservient to another most desirable object, viz., that of eventually superseding altogether the necessity of instrumental interference. I have often been consulted in cases of delirium, accompanied by intense irritation, and the most overwhelming sufferings; when a free abstraction of blood has appeared to exert a magic influence over this symptom, in common with all other more alarming symptoms of the case. I have indeed never encountered a case of delirium in my own practice; which I impute simply to the fact that I have never suffered so much constitutional irritation and excitement of the vascular system to accumulate at any one period of labour, as to expose my patients to any considerable danger of it."

No experienced practitioner will dispute the importance of the above passage. The practice which it inculcates is, in fact, the essential part of the treatment of common inflammation of the brain, a disease which, even when uncomplicated, is always of the most serious consequence.

"Bleeding," as Dr. Davis again insists, "will seldom fail to be the harbinger, at least, of a temporary calm after a violent storm of suffering; which at all events will give to nature further time to refresh and to concentrate her powers, and to the practitioner an opportunity to deliberate coolly on the actual position and prospects of his case, as also on the expediency and choice of ulterior measures."

14. "*On the use of instruments on account of Hæmorrhage during labour.*"—There is no complication of labour so formidable as that of hæmorrhage, and none requiring more prompt measures on the part of the practitioner; in as much as on the practice adopted depends the safety of the maternal and foetal lives. In cases of uterine hæmorrhage occurring in the first stage of labour, the best treatment is that of turning, as being quickly and easily performed.

"It is a fact, which must have often been observed by practitioners of experience, that the operation of turning is for the most part immediately followed by a cessation of the hæmorrhage. The change thus effected in the situation of the child in utero being made, it is generally both unnecessary and improper to proceed hastily to complete the delivery; which, therefore, it would often be much better to delay for an hour or two, to await a favourable disposition of the soft parts, than to undertake immediately after having brought down the feet into the birth. I believe the operation of turning would prove the means of saving a much greater number of children, without in any degree compromising the interests of the mother, than it really does, were it generally the practice to observe on this very essentially practical point, the cautious forbearance here recommended."

On the contrary, if the labour be so far advanced that the head of the child has descended into the cavity of the pelvis,

When Dr. Davis recommends that the practitioner should decide between the use of the forceps and that of the perforator and crotchet.

15. "*Of Puerperal Convulsions as an indication for the use of instruments.*"—In this section Dr. Davis deprecates the too common notion, that in cases of convulsion the immediate delivery of the patient is the best mode of relieving such a distressing complication of the parturient function.

Our author looks to the true pathology of this affection, as consisting in an undue accumulation of blood in the vessels of the brain and its membranes; and states, that he never knew an instance of puerperal convulsions "which had not been preceded by severe headache, giddiness, violent throbbing of the temporal arteries, impaired vision, or some other unequivocal symptom of an excessive fulness of the blood-vessels of the brain. This condition," our author thinks, "is also produced indirectly by an inordinate exertion of the agents of parturition."

The remedy for such cases is very obvious, viz., large and repeated blood-letting, proportionate to the exigencies of the case. With respect to obstetric assistance in such cases, if the process of labour goes on with vigour, it is better to wait for some time, to see what the natural efforts will do. We cannot deny ourselves the satisfaction of giving the author's ideas upon this subject in his own words.

"If the parturient efforts were vigorous, and it should appear certain, after a careful and most accurate examination, that there was no absolute insufficiency of space within the pelvis, nor yet any immediate danger of contusion of the soft parts lining that cavity; the paroxysms of the disease in the mean time appearing to have been greatly mitigated by the bleeding, and the general strength good; I must take the liberty to observe, that I should consider any kind of instrumental interference in such circumstances not only unnecessary, but positively injurious to the best interests of the patient, and discreditable to the intelligence of the practitioner."

16. "*Of Syncope during Labour as an indication for the use of instruments.*"

"Syncope, in the proper meaning of the word, is an alarming symptom during labour; indicative of the occurrence of some serious accident, amounting possibly to laceration of structure, or at least productive of much and unequivocal lesion of several of the most important functions of life, and at all events most imperiously claiming the instant and utmost attention of the obstetric attendant. In as much as it might be the effect of internal hæmorrhage, or of a lesion of some important structure or function, it could not fail to urge on the consideration of the practitioner the expediency of speedy delivery, either by turning and

bringing down the feet, in cases of natural presentation, and at early periods of a labour, or by having recourse to the use of suitable obstetric instruments at a more advanced stage."—p. 171.

Dr. Davis has detailed several interesting cases illustrative of the danger attending this formidable symptom during parturition. Every practitioner must be convinced that even a short delay may exclude the most distant prospect of saving the life either of mother or child. One point of practice should be impressed universally on persons practising this art, viz., that in cases of exhaustion, or great collapse after uterine hæmorrhage, the patient should never be permitted to be placed in an erect posture, as fatal syncope, without the additional loss of a single ounce of blood from the uterus, may be the result. This we have frequently observed in diseases unconnected with the puerperal state, particularly in exhausted subjects of typhoid fever; some of whom have died whilst sitting in the erect posture, responding to the calls of nature.

"When the head of the child is high up, within or above the brim of the pelvis, the orifice of the uterus not completely developed, and the pains either languid or totally suspended, the delivery should be effected by turning.

"When the head is so far advanced within the cavity of the pelvis, as to make it very improbable that turning could be accomplished without exposing the patient to considerable irritation, the liquor amnii in the mean time having escaped, and the orifice of the uterus not sufficiently dilated to warrant an attempt to deliver with the forceps, the practitioner must submit to have recourse to one of the most melancholy resources of the art, viz., the operation of opening the child's head and delivering with the crotchet. But if the head of the child shall have descended so low into the pelvis as to be within the safe reach of the forceps, and the state of the maternal parts, especially that of the orifices of the uterus and the vagina, so as to admit of its safe application, then it is obvious that it would be the duty of the medical attendant to prefer that mode of delivery; as it would afford the best chance, however inconsiderable that might be, of saving the life of the child."

17 "*The importance of a just prognosis in cases requiring the aid of instruments.*"—Dr. Davis points out the responsibility devolving upon the operator; that the operation is undertaken with the view in some cases of saving the lives both of the mother and the child; in others, that of one of the two, according to the special nature of the case requiring such mechanical aid. Hence our prognosis must depend on a variety of circumstances to be specially considered in individual cases. In instances of severe complication, such as rupture of the uterus, or of the

bladder, cystico-vaginal rupture, labours complicated with puerperal convulsions, or uterine hæmorrhage, the prognosis must be carefully considered, as such complications are decidedly perilous, and too often fatal as to their results.

The next subject brought under the reader's notice is the application of the forceps; previous to which Dr. Davis gives several rules, to be kept in view when performing such operations, as follows:—First, that the child's head shall have previously entered and reached a considerable depth within the cavity of the pelvis. Secondly, that the blades of the forceps, with certain exceptions and modifications to be afterwards noticed, are to be introduced, so as ultimately to be applied over the sides, respectively, of the head and face. Thirdly, that the use of the forceps can never be indicated before the orifice of the uterus shall have been amply dilated, excepting in urgent cases, such as alarming uterine hæmorrhage, faintings, or other equally dangerous complications. Fourthly, that the left hand blade of the forceps should be first introduced. Fifthly, that the locking of the forceps should never be effected by violence. Sixthly, that all forceps operations should be performed very slowly. Seventhly, that the requisite amount of force to be used in obstetric operations should be very gradually applied. Dr. Davis then gives rules for the application of the forceps under four several positions of the foetal head. 1st, When the occipito-vertical part of the head is directed towards the anterior part of the pelvis. This is illustrated by four excellent plates, representing the mode of introducing the left hand-blade;—that of the right-hand blade; both branches actually introduced; their mutual adjustment at the lock, and the mode in which the child's head should be withdrawn from the pelvis. 2d, When the occipito-vertical part of the head is directed towards the hollow of the sacrum. 3d, When the forehead of the child is directed towards the right side of the pelvis, and the right ear is to be felt immediately behind the symphysis of the pubes. For this position, Dr. Davis, as already noticed, has invented a pair of forceps, with blades of unequal length, and peculiarly curved and twisted; for a description of which we must refer to the work itself. The fourth and last position, under this head of his subject, treated of by our author, is, when the face is directed to the left side of the pelvis, with the left ear to be felt immediately behind the symphysis of the pubes. For this peculiar case Dr. Davis has proposed an instrument, similar in principle to the foregoing, and only differing in the direction of its edged concavities and convexities being reversed.

*Of the Long Forceps.*—This instrument is a pair of forceps

of sufficient length to admit of its application to the foetal head, before it has descended into the cavity of the pelvis. It is a power in operative midwifery only occasionally required.

"Of these indications," the author states, "that an insufficiency of space at the brim of the pelvis seems entitled to our first notice, at least as a matter of inquiry. The space required at the brim of the pelvis, in the direction of the conjugate diameter, is four inches. The actual space supplied at this part, in a well-formed pelvis, is four inches and a quarter. The head of a child of standard size, measuring three inches and a half from one parietal protuberance to the other, both inclusive, and the soft parts within the pelvis necessarily occupying a certain amount of space, it follows that the head of a well-grown child could not engage in a pelvis, having only three inches and a half for its conjugate diameter, without the adoption of some contrivance for effecting either an enlargement of the conjugate diameter of the pelvis, or a diminution of the child's head, in the direction of its transverse diameter." Again our author states, "If nature, then, is equal to the production of such important effects, it may well be asked, whether, in cases of the kind here supposed, it can ever be justifiable or advantageous to interpose any assistance of art? We may assume, as a general principle, that nature must herself be right as to the very gradual manner in which she effects the compression of the foetal head. By a procedure so slow and cautious, the circulations, both of the vessels of the brain and those of the scalp, are allowed time to accommodate themselves to the degree of compression which the head has to sustain. The compression is also made in the most favourable direction as to the object to be attained by it; and I am disposed to think that the foetal head might thus be compelled by nature to undergo a greater diminution of bulk in the requisite diameter, compatibly with the child's life, than might be safely effected by any artificial compression whatever. For these reasons, it should be considered as generally very improper to have recourse to the use of the long forceps, as long as nature can be entrusted to exert her efforts without compromising the safety of the mother, and while she holds out a fair promise, that eventually, and compatibly with a living birth, she may triumph over her difficulty."

The use of the long forceps may be had recourse to in cases of profuse uterine hæmorrhage, the orifice of the uterus being fully dilated, but the head of the child being still at the brim of the pelvis, in preference to turning, or in cases of rupture of the uterus under the circumstances above-named. The practitioner, however, must in this complication expect considerable difficulty in the use of his instrument from the recession and unsteadiness of the foetal head, after the escape of the body either wholly or partially into the general cavity of the abdomen. Dr. Davis then treats of the application of the long forceps under the circumstances of the four following positions, viz., 1st; When the

foetal occiput corresponds with the front of the pelvis. 2d, When the forehead is to the front of the pelvis. 3d, When the occiput is directed to the right side of the pelvis: and, 4th, When the occiput is directed to the left side of the pelvis.

“*Of the treatment of labours under the circumstances of face presentations.*”—Face presentations are always formidable, and perhaps less capable than any other of assistance by mechanical means. If this presentation be detected before or soon after the rupture of the membranes, Dr. Davis prefers the operation of turning; but if, as frequently happens in such cases, some time has elapsed after the discharge of the waters before the precise state of affairs is known, there is much danger to the life of both mother and child. Our attention is to be directed accordingly to several points in the management of such cases, and we are to consider—1st, Are the natural efforts sufficient to accomplish the delivery? Many cases thus left to the spontaneous efforts of the mother do well even under unpromising circumstances, the chin being directed to the front, or to either side of the pelvis.

“In all face presentation cases, the head usually engages in the pelvis very slowly; but in the three positions enumerated above, viz., when the chin is directed either to the front or to one of the sides of the pelvis, its descent ultimately into the cavity may, in general, be pretty confidently anticipated without any artificial assistance. I therefore consider that the prosperous issue of the majority of such cases would mainly depend upon the judiciousness of their treatment constitutionally; which would have most especially for its object the subduction of the inordinate action of the agents of labour, and that of its natural consequence, an excessive excitement of the heart and arteries. It must, however, be acknowledged, that the dexterous use of one or two fingers may occasionally be employed with great effect to facilitate and expedite the process. When the forehead, for instance, is directed to one side of the pelvis, two fingers might often, with advantage, be passed up and applied to the far side of the lower part of the face on the other, to lower the chin, and, by a gentle and gradual movement of it, to bring it forward to engage under the arch of the pubes. This procedure failing, and the demands of the case becoming more and more urgent, it might become the duty of the practitioner to have recourse ultimately to the instrumental resources of his art.”—p. 248.

When the chin of the child presents to the pubes of the mother, the common forceps may be applied. If to either side one of the obliquely curved forceps, with blades of unequal length, may be used to change the position of the face. When the chin bears against the sacrum, so that the foetal forehead is directed

to the front of the pelvis, Dr. Davis seems to despair of doing good by mechanical means. All that can in this case be certainly expected is to save the life of the mother.

*"Of ear and side of the face presentations."*—"On considering, however, the mechanism of such labours," Dr. Davis remarks that "it is not difficult to discover their almost exclusive indication of treatment; viz., that of bringing down, by a gentle rotatory movement of the head on its occipito-frontal axis, its vertex, or any other part in the immediate neighbourhood of the vertex, towards the bottom of the pelvis. It is generally asserted by French writers, that this change of position might often be readily effected by the fingers. At all events it would always be right to make the first attempt in that way. But should the fingers prove too short or too deficient in power, then our common vectis should be substituted, and used much in the same way."—p. 253.

In the fourth general section of his work our author treats of other expedients for preserving the lives both of the mother and her offspring.

*"Of the operation of inducing premature labour."*—"The original object of the operation for inducing premature labour was to enable a woman having too small a pelvis for the birth of a child at the full period of gestation, to be delivered at an earlier period of a living child of small dimensions; but, nevertheless, of a child sufficiently developed to be competent to maintain, after its birth, an independent life. It has, however, since that period been had recourse to as a means of saving the lives of women become the subjects, at advanced periods of gestation, of alarming uterine hæmorrhage."—p. 279.

If the object of the practitioner be to induce speedy labour, the membranes are recommended to be punctured with a steel wire, having a small handle properly attached to it. In cases of uterine hæmorrhage a long female catheter should be employed, to insure a speedy discharge of the liquor amnii.

*"Of the operation of craniotomy."*—For this operation Dr. Davis has suggested several instruments, by which all hazard to the maternal structures is completely obviated. Having glanced at an instrument presented by him to the profession some years ago, under the designation of Craniotomy forceps, of which the two blades are separable at pleasure, our author gives a description of a guarded crotchet, the prongs of which are intended to transfix the foetal scalp and skull from the outside of the head. The power of this instrument is such that it cannot fail to act in perfect conformity with the intention of the operator, and according to the degree and direction of the force which he finds it necessary to apply to it. Some practitioners having expressed their preference for an instrument by which the foetal skull might

be transfixed from within, our author has invented a very admirable instrument on this principle. Like the former it consists of two counterparts, one of which forms a guard to the other. In cases where the destruction of the foetal head is insufficient to accomplish the delivery, it becomes necessary to operate also on the body of the child. For this purpose another variety of guarded crotchet is proposed by Dr. Davis. With these instruments of our author the operation of embryulcia may be undertaken with much greater confidence than heretofore; and, in ordinary circumstances, with complete safety to the mother.

In cases, however, of extreme distortion of the pelvis, greater difficulties still are to be encountered in the extraction of the foetus. We could here very much wish to indulge in a long quotation from this excellent volume, in illustration of the extreme difficulties now referred to, and of the ingenious contrivance furnished by our author to overcome them.

The instrument to which we allude has received from the author the learned designation of *Osteotomist*. As the name implies, it is intended to break down the foetal skull or indeed any portion of the foetal skeleton presenting at the brim of a contracted pelvis. It is in fact a pair of strong cutting pliers without angles or projections of any kind. We have ourselves seen this instrument applied to a piece of strong bone, and were astonished at the facility with which the bone was reduced to small fragments by a few strokes of the osteotomist. Dr. Davis concludes his description by giving practical rules for the use of this original piece of mechanism. An implement admirably well adapted for the relief of a hitherto hopeless class of cases.

In cross presentations, under peculiar circumstances, it is sometimes expedient to perform the operation of decapitation. In such forlorn cases we are to understand that the operation of turning is inadmissible. The operation of separating the head must be considered hazardous to the mother under most circumstances: but by an instrument, proposed by the author, the danger in question is greatly reduced.

The work is concluded by practical observations on the use of embryotomy instruments in general.

On the whole, of this very original and elaborate work, it is impossible to speak but in terms of high praise. The materials of it, it is obvious, must have occupied many years of study, and much minute observation of the varieties of difficult parturition. Dr. Davis is therefore entitled to the sincere thanks and esteem of his professional brethren for the information which he has



imparted, and we hesitate not to assert that this work will become a standard book of reference on the subject of operative midwifery. We regret, however, that its unavoidable expensive form may prevent it getting into the hands of young men, to whom, from its practical nature, it might prove a valuable acquisition.

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*An Inquiry into the Nature and Treatment of Diabetes, Calculus, and other Affections of the Urinary Organs: with Remarks, &c., &c., &c.* By WILLIAM PROUT, M.D. F.R.S. Second Edition, Revised and much Enlarged.—pp. 340. Lond. 1825.

THE subject of this volume is one of great importance, though by the generality of practitioners it is by no means considered with the attention that it merits, and yet it promises, perhaps more than any other, a rich harvest of reward to him who shall cultivate it. To relieve pain or alleviate agony must surely be a rich reward to a feeling mind; but the practitioner who makes himself master of this subject, will not only gratify his feelings, but will infallibly increase his fortune and his fame. Nor will any man find the requisite knowledge difficult of acquisition, *provided*, to use the words of Dr. Prout, *he will bestow the requisite attention upon the subject.*

In our examination of Dr. Prout's work, we shall not enter upon the chemical details, as these have already been before the public; but we shall endeavour to select from it every thing that is of practical importance.

We, therefore, pass over the composition of the blood and urine, but we think it necessary to extract some of our author's general remarks upon the subject.

"The most striking differences," he observes, "between the blood and the urine, is the complicated nature of the latter. The astonishing variety of substances formed from such a paucity of materials, naturally lead us to reflect upon the vast extent of the operation of the kidneys. On considering, however, a little more attentively the nature of the operations of these organs, we shall find, as Berzelius has justly remarked, that acidification constitutes the chief feature in them."

Thus the sulphur and phosphorous of the blood are converted into acids, and a new acid, the lithic, is generated altogether.

Such is the natural and healthy operation of the kidneys ; but, in certain forms of disease, the acidifying tendency is carried to excess ; or it may be suspended, diminished, or subverted ; and hence the production of unchanged blood or albuminous matter, of neutral substances, as urea or sugar, or even alkaline substances, as ammonia, lime, and magnesia ; and hence the passage of sulphur and phosphorus unchanged.

Dr. Prout closes his observations with some notices on the modes in which functional operations are more particularly concerned in the production and modification of diseases.

“ In the first place,” he says, “ there can be little doubt that functional operations in general, and more particularly those of glands, are regulated according to certain laws, and thus necessarily circumscribed within narrow bounds. It is indeed true that extraordinary operations of a vicarious nature are sometimes performed by particular organs, but such occurrences scarcely affect the general law ; and no one, I presume, will readily assert that the kidneys, for example, can form any other substance as well as lithic acid, or, what amounts to the same thing, can form lithic acid from any substance indiscriminately presented to them. If this be admitted, the inference is obvious, that the kidneys must have the ingredients on which they operate, prepared for them in some uniform manner ; and thus a series of preliminary operations is implied, every one of which must be presumed to be perfect, before the kidneys can be supposed capable of performing their duty correctly. The chief of these preliminary operations are digestion and assimilation ; and hence it becomes evident that if these important processes are in any way deranged, those of the kidney will be more or less affected.

“ Secondly, A disposition to diseases of the urinary system, as well as of the contiguous organs at the same time, seems to be frequently inherited. Of this I have seen many examples ; and it is often wonderful how curiously this tendency will be sometimes modified in different individuals of the same family ; thus where a parent has laboured under disease of the kidney or bladder, one of the sons has been cut for the stone, another has laboured under disease of the rectum, the daughters have suffered from uterine affections, &c. Indeed, I have frequently remarked, that when the males of a family have been subject to urinary diseases, the females have been more or less liable to diseases of the generative system.

“ Thirdly, Persons subject to urinary affections often suffer from different forms of these diseases at different periods of their lives ; thus a person who has been subject to lithic acid deposits, will occasionally lose that form of diseased secretion, and pass mulberry calculi, and vice versa. And we shall see hereafter that every other form of deposit is liable to be changed by circumstances into that of the phosphates. Again, I have known the son of a father who died of diabetes exceedingly liable, while a young man, to lithic acid deposits ; and on the

other hand, have seen an instance in which one of a family much troubled with lithic acid deposits, died of diabetes, &c.

“Lastly. It may be remarked in general, that when acids are formed in excess by the kidneys, the urine is commonly small in quantity and high coloured, and the disease inflammatory; when neutral or alkaline substances, the urine on the contrary is generally pale coloured and larger in quantity, and the diseases are those of irritation and debility.

“The practical inferences to be drawn from these general remarks, which might be much extended, are most important, and should be constantly kept in mind. From them we learn the deep seated and constitutional character of urinary diseases in general; their intimate connexion with each other, and the important information respecting the nature of any particular disease to be derived from the examination of the urine; they guard us also against the absurdity of trifling with supposed specifics; of considering the more rare forms of disease as anomalies, and at the same time direct us to modes of treatment founded on precise and rational principles.”

The diseases of the urinary organs our author has divided into three classes: *functional*, *mechanical*, and *organic*. But it being difficult, in a practical point of view, to follow this natural arrangement,

“I shall consider the subject,” he says, “under two general heads only; namely, functional diseases, comprehending, as before-mentioned, all those affections arising from a deranged operation of the kidneys, but including likewise all sorts of mechanical deposits formed by and in those organs, as gravel, &c.; and, secondly, organic diseases, including not only as before-mentioned, all those connected with actual disorganization, but likewise all sorts of urinary concretions of sufficient magnitude to be termed calculi.

I. The first general class of diseases, according to this mode of dividing the subject, will naturally arrange themselves under two heads, namely, *a.* diseases in which principles soluble in the urine are morbidly deranged in quantity or quality; and *b.* diseases in which principles insoluble in that secretion are similarly deranged.

“*a.* The first of these divisions will include,

“1. Various forms of albuminous urine.

“2. Anonymous diseases, in which an excess of urea is a characteristic symptom.

“3. Diabetes.

“*b.* The second division will include,

“4. Lithic acid deposits.

“5. Oxalate of lime ditto.

“6. Cystic oxide ditto.

“7. Phosphatic ditto.

“II. The second general class will comprehend the following subjects:—

“1. Origin and increase of urinary calculi in the kidneys, with inflammation and various organic affections of these organs.

" 2. Origin and increase of calculi in the bladder, with organic diseases of this organ and the prostate gland.

" 3. General observations on the periods of life, sex, &c. subject to calculous affections, &c.

" To these will be added,

" 4. Practical rules for determining the nature of the affection and its appropriate remedies from the properties of the urine, and other symptoms; being a general recapitulation of the whole subject under other points of view.

" The above may be considered as comprehending all the derangements of the urinary system at present known as distinct and separate diseases. Of minor derangements of sufficient importance only to be considered as symptoms, it is not my intention at present to treat, though many of these will be mentioned incidentally in the course of the present volume."

Under the head of functional diseases, the first treated of are those in which the presence of an albuminous principle is the characteristic symptom. The albuminous matters partake in some degree of the properties of both those of the chyle and serum; though, generally, more of those of the chyle. *Chylous* urine is almost invariably pale coloured and of low specific gravity; and on being exposed to heat it becomes opaque, and deposits flakes of albuminous matter. This affection exists in every possible degree, from the least quantity of albumen to perfect chyle.

" With respect to the symptoms, it will be occasionally found, that an albuminous condition of the urine exists to a considerable extent without the consciousness of the patient. Generally, however, there is a frequent desire to pass water, and for the most part decided diuresis. I have never known albuminous urine attended by positive pain, though the patient, for the most part complains of certain indescribable sensations which render him conscious that all is not right. In severe cases, where the drainage from the system is greater than natural, there are, as might be expected, an inordinate craving for food, and other symptoms somewhat resembling diabetes.

" A chylous condition of the urine may occur at all ages; but those in whom I have seen the ordinary forms of the affection most frequently take place have been past the middle age, of an irritable scrofulous habit and impaired digestive powers, and who frequently have been free livers. In such habits more particularly, and perhaps in any under certain circumstances, this condition of the urine may be excited by a variety of causes, such as a long course of mercury, stimulating diuretics, violent passions of the mind, exposure to cold, &c. Frequently, however, it will be found that this affection cannot be traced to any particular cause."

This disease is so *passive*, that it may exist for years without much affecting the constitution, or even interfering with the

important function of generation. In its treatment we should avoid stimulating diuretics, especially of the alkaline kind. Sedatives and tonics may be occasionally useful.

Dr. Prout next speaks of diseases where an excess of urea is the characteristic symptom. Whenever the specific gravity of the urine is high, for example, above 1,025 or 1,030, a spontaneous crystallization will frequently take place, on the addition of nitric acid. When so concentrated a state of the urine is observed in fevers, &c., it is quite unconnected with disease of the urinary organs, and appears to be owing to a diminished secretion of water only. In the urine of children and others, depositing the phosphates, urea, as compared with the other ingredients, is often in excess. Such diseases do not appear to have been hitherto distinguished, but have been probably confounded with other maladies, particularly with that form of diabetes, called *insipid*; but they are very different from diabetes.

In these diseases there is almost constantly a frequent and urgent desire of passing water, both by night and day; and the quantity voided is generally much greater than natural; particularly in cold weather, and when the patient is under mental agitation. There is also occasionally irritation about the neck of the bladder, extending, sometimes, along the urethra.

"In most of the cases of this disease," says our author, "which have hitherto fallen under my own immediate observation, the subjects have been middle-aged men, of thin and spare habit, with a sort of hollow-eyed anxiety of expression in their countenance; free from gout and constitutional disease in general; and as far as could be ascertained, from any organic defect in the urinary organs. In every instance they had been induced to apply for medical advice, not so much from the pain, as from the inconvenience of the disease, and the dread of its ending in something worse; and, what may be worth remarking, in several instances confessed that they had been addicted to masturbation from very early youth."

Whatever debilitates the system, and particularly the urinary organs, may give origin to these diseases; and if they are allowed to proceed unchecked, some of them will probably terminate in diabetes, or a deposition of the earthy phosphates. Both the nature and symptoms of these diseases appear to be very various, though they may all agree in having an excess of urea in the urine.

"This want of uniformity in the nature of the disease of course precludes the idea of any uniform plan of treatment, which must be adapted to circumstances. In most of the cases, however, which have hitherto fallen under my own observation or knowledge, sedatives, and particularly opium, have been the most efficient remedies; and by the judicious use of these, combined with other appropriate medicines, it is probable

that in most instances the disease can be suspended, if not removed altogether."

Purgatives and alteratives are also very generally useful. In one instance, Dr. Prout ordered *Copaiba*, but it decidedly increased the complaint, which, he thinks, will be the case with all stimulating remedies.

Our author next favours us with some observations on *Diabetes*; and he recommends, that in future the term be restricted to those affections in which the urine is *saccharine*. In this disease the quantity of urea is almost always much diminished, though it is perhaps never entirely wanting. The urine, however, contains little or no lithic acid. If a diabetic patient passes in 24 hours ten pints of urine, of the average specific gravity of 1.040, it will contain more than a pound and a quarter of solid extract!

After the *saccharine* condition of the urine, the most striking and constant symptom in diabetes is *diuresis*, or an increased secretion of urine, which is sometimes enormous; said even to be on some occasions double the ingesta.

"I have seen a case," says Dr. Prout, "in which the usual symptoms of diabetes consequently manifested themselves in their worst form, and in which the patient's attention was attracted by the peculiar qualities of the urine long before its quantity struck him as any thing remarkable. In this case it was observed, that wherever the urine happened to fall on the dress, an imperfect crystallization took place, and the part became stiff and clammy, and attracted the dust. I was well acquainted with this gentleman, and in the habit of meeting him as a friend for several years before he was known to have the disease in question, and consequently during the time when the urine possessed the above properties. He was of a thin spare habit, and at the above period very nervous, and subject to occasional slight fits of gout, which latter affection has entirely left him since the complaint has assumed the more decided character of diabetes. In this case I cannot help thinking, that a *saccharine* condition of the urine existed in a greater or less degree for a considerable time before the complaint became complicated with *diuresis*. I may also remark, that a second case, very similar to the above, came to my knowledge some time ago, but from my not being acquainted with all the particulars so thoroughly as I could wish, I do not lay any stress upon it."

Probably it is not the *saccharine* state of the urine, but the enormous drainage, which occasions the most distressing symptoms of diabetes.

Dr. Prout does not think that the application of cold alone can produce diabetes, unless the patient have already an inherited predisposition to the disease.

"That a predisposition or tendency to this affection exists in some families I cannot doubt," he says, "as I have now witnessed four distinct instances of this circumstance. The first was that of a young gentleman between twenty and thirty years of age, whose mother and uncle had died of the disease, and who feared that he laboured under the disease himself, as he appeared to have some of the symptoms. On examining the urine, however, I found no saccharine matter, but a great excess of urea, which seems to constitute the first step, in some instances, towards the presence of saccharine matter; but independently of this, the circumstance that two individuals, brother and sister, of the same family died of the disease, is sufficient to mark the family nature of the affection. The second case was that of a lady about fifty years of age, whose brother or sister, I do not remember which, had died of the same disease. The third case was that of a young girl, about ten years of age, in whom the disease proved fatal, and whose father, two or three years before, had died of a similar affection. And it may be remarked, that in August last I was requested to examine the urine of another girl of the same family, and about the same age, who it was feared had a tendency to the same affection. The urine contained no sugar, but a great excess of urea, thus clearly marking the tendency to the affection. The fourth instance was that of a gentleman who died of this affection at the age of fifty-four, and whose father for many years before his death was stated to have laboured under the same disease. What is remarkable and well worth mentioning, this gentleman's son, who was about thirty years of age, stated that he was much troubled with lithic acid gravel.

"From these circumstances, then, and others that, perhaps might be mentioned, I am induced to believe, that a tendency to this affection, frequently inherited, and amounting, perhaps, in some instances, to an actual saccharine condition of the urine, exists in certain individuals, which on being roused, or called into action by some favorable exciting circumstance, such as exposure to cold, or any thing inducing feverish or inflammatory action, becomes for the first time complicated with diabetes, and thus assumes all the well-known characters of diabetes."

The disease, when cured, is very liable to be reproduced on the slightest exposure to exciting causes. The patient must, therefore, be considered as standing on the brink of a precipice, and hence the prognosis is always unfavourable.

With regard to the treatment, Dr. Prout observes very truly, that "there is no disease in which so much mischief has been done upon false principle, and by random experiment, as in this." Remedies have been extolled, which act merely by diminishing the flow of urine, without making any improvement in its quality. But, at present, we have certainly no specific for the latter purpose. In cases of recent occurrence, and of an acute character, the propriety of general blood-letting is evident; but, in debilitated habits, its propriety is at least doubtful.

"In most cases also," says Dr. Prout, "frequent local bleeding from the epigastric region has been found beneficial, particularly when an extraordinary sense of fulness, heat, or tenderness has been experienced, about the stomach. The bowels should be kept freely open by some gentle aperient, and, perhaps, there is none better suited for this purpose than castor oil. All saline and other purgatives, likely to act as diuretics, should in general be avoided, as should mercury, which seems capable of doing much mischief in this disease, more especially when pushed to any extent.

"To counteract that nervous irritability so distressing in this affection, the use of some sedative, and more especially opium, seems to be indicated; and of all the preparations of opium the pulvis ipecacuanhæ compositus, from its well-known property of determining to the skin, appears to me to be the best suited to the purpose. The dose of this of course must be regulated according to circumstances, but in few cases more than from gr. v. to ℥j three times a day will be required, and very often much less than this will serve all useful purposes. In cases of an acute character the use of opium should always follow blood-letting, without which precaution it may do more harm than good. In cases of a chronic character, and accompanied by much debility and nervous irritation, I have seen the very best effects produced by a combination of the preparation of opium above-mentioned, and full doses of the carbonas ferri, exhibited in the form of an electuary, made with the albumen ovi. In such cases, as the patient recovers, the quantity of the sedative may be gradually diminished, while that of the tonic (provided nothing contra-indicates its use) may be increased. The sulphate of quinine has also been lately said to prove particularly beneficial in this state of the affection.

"In conjunction with the above remedies, and with a view of restoring the cutaneous functions, the warm or vapour bath, the flesh brush, &c. may be freely employed, and the patient should also, with the same view, wear flannel next the skin, and while thus warmly clothed, take all those exercises which his debilitated state will permit, without producing too much fatigue."

In cases of great debility, exercise of any kind must be used with caution, as it is apt to produce syncope.

Of all the means of cure, attention to diet and regimen seems to be of the most importance. It is necessary to give drink, but it must be given sparingly. The Bristol Hotwell has been long celebrated in diabetic affections; and it seems to be by its carbonate of lime that it does good. But, according to Dr. Prout, both reason and analogy require that the purest waters, even distilled water, should be employed in this affection. Various animal decoctions also, and milk may be used; and, in cases of great debility, the patient may be indulged with a little weak brandy and water.



"As general rules also connected with this subject, it may be observed that all drinks should be taken in a tepid state, as the patient, whose craving is generally after cold drinks, will thus content himself with less: and, secondly, they should be taken at those periods, in preference to others, when the stomach is not loaded with solid food."

The diet of the patient should consist essentially of animal and farinaceous matters; because such are more easily digested and assimilated than other articles of food. We think it right to extract a note of the author's upon this subject.

"I have watched," he says, "the effects of an exclusively animal diet on the urine of diabetic patients. In most instances it seems to lessen the quantity, and deepen the colour of the urine, and thus to disguise the saccharine matter present; but as far as I have been able to ascertain, it does not diminish the specific gravity of this secretion. I think also, with Dr. Marsh, that an unlimited allowance of animal food is calculated to do much harm in some instances, and agree with him, that the diet should always consist, in part at least, of vegetable, and particularly of farinaceous matters, as mentioned in the text. Indeed, if the patient conforms upon the whole to the prescribed regimen, I see no objection to his being allowed occasionally other vegetable matters, as fruit, &c. in very small quantity. When I make this statement, however, I hope not to be misunderstood. There is no doubt that a diet exclusively vegetable, and particularly consisting of large quantities of sweet or acedent matters, is liable to do a great deal of mischief in this disease."

"As a general rule," he continues, "with respect to diet, I should say, that a quantity greater or less, according to circumstances, but always strictly regulated, should be taken at periods of four, five, or six hours; and that at the time of taking solid food, and for an hour or two afterwards, all drink should be abstained from as much as possible. Were I to particularize the species of food, I should say, generally, that mutton or beef, plainly cooked, and particularly mutton-chops or beef-steaks, rarely done, should be taken twice in the twenty-four hours, and that the other meals should consist of any simple article that can be prepared from farinaceous matters with milk, eggs, &c. only."

In the chronic stages of the disease, animal food will be of more advantage than in its acute state.

If the patient's mind cannot be kept tranquil, little good will be obtained from any treatment. But even under the most favourable circumstances, a perfect cure cannot be obtained, for the urine has always a high specific gravity, thus unequivocally demonstrating the presence of saccharine matter. Out of twenty diabetic cases, Dr. Prout has only seen *one* where the urine became natural; but that was *only for a very short time*.

The author now enters pretty largely upon the subject of uri-

nary gravel and calculi, but our limits will allow us to extract no more of it, than his concluding observations :—

“Such,” he says, “is a summary account of the various forms assumed by urinary deposits and of their comparative frequency. The reader, however, will readily perceive that, although so different in their composition and appearance, they may in fact be considered as made up of four elementary substances only, viz. :—

“1. The lithic acid and its compounds.

“2. The oxalate of lime.

“3. The cystic oxide: and,

“4. The earthy phosphates;

two or more of which principles are seldom or never found in excess in the urine at the same time. Hence they may be supposed to represent so many distinct diatheses, or conditions of the system, requiring to be separately considered; and this accordingly is the principle on which the future arrangement of my subject will be founded. The preceding order has been adopted for the following reasons:—The lithic acid justly claims to be considered in the first place, not only because it constitutes the most frequent constituent of calculi, but is that also which most generally gives origin to the other species, by furnishing a nucleus round which the matters composing them may concrete. Next to the lithic acid, the oxalate of lime species of calculus seems to possess most strongly the characters of an original diathesis, from the frequency with which it gives origin to renal nuclei. The cystic oxide is extremely rare; but it seems to originate most frequently in the kidney, and moreover has the property, when present, of excluding other diatheses. The phosphates naturally fall to be considered in the last place, from the circumstance that they very rarely constitute entire calculi, but succeed to the other diathesis, and are themselves very rarely, if ever, succeeded by any other diatheses.”

Dr. Prout next examines the Lithic Acid Diathesis. Here, there is an excess of lithic acid in the urine, and it is separated, either as an amorphous sediment, or in a crystallized form. The first is in combination with some base, generally ammonia, and the other is nearly pure. The author speaks first of amorphous sediments.

“In considering the causes producing this excess of lithic acid in the urine, perhaps I cannot do better than enumerate the circumstances (excluding, of course, actual disease) which have been observed to produce these sediments in a person subject to slight dyspepsia, but in other respects healthy, and who, consequently, from his susceptibility to the operation of the exciting causes, may be considered in the light of a delicate test of their presence and action. These exciting causes are of three kinds—*a*. Simple errors in diet; *b*. Unusual or unnatural exercise, either bodily or mental, particularly after eating, and the want of proper exercise at all other times; and, *c*. Debilitating circumstances.

"*a.* Errors in diet may consist either in a simple excess of the usual wholesome articles of food, or in the partaking of food which is unwholesome, or which uniformly disagrees with an individual. With respect to an excess of wholesome food, it has been observed, first, that all other circumstances being the same, an unusually heavy meal, especially of animal food or of bread, is invariably followed by a deposition of the lithate of ammonia from the urine. Secondly, that the circumstances of quantity and quality of food being the same as usual, an abrupt or decided change in the time of partaking of it, such, for example, as dining at noon, or eating supper (to which the person is not accustomed,) will very frequently produce the same effect: and, lastly, that the same effect is occasionally produced by partaking of food to which the person has not been used, though wholesome in itself, and taken at the usual times, and in moderate quantity.

"With respect to the wholesomeness of food, so much depends upon idiosyncrasy, that this point can only be determined in many instances by actual trial. Whatever agrees with the stomach of an individual, when taken in moderate quantity, may perhaps be presumed to be easily digested, and therefore wholesome as far as regards that individual; and the stomachs of different persons are so various and capricious in this respect, that there is scarcely any kind of food but some stomach may be found capable of digesting it. Certain substances, however, are universally acknowledged to be more difficult of digestion than others. These are enumerated by writers on dietetics, and are sufficiently well-known. I shall therefore only notice one or two substances which, of all others, have been observed most apt to produce a deposition of the lithate of ammonia: these are animal substances in general, and more especially heavy, unfermented bread, or compact, hard-boiled fat dumplings or puddings.

"Under this head, perhaps, may be classed the effects of waters. Hard and impure waters have been long supposed to possess a great influence in diseases of the urine, and every day more and more satisfies me of the truth of this opinion. They frequently derange delicate stomachs very considerably, and sometimes have a tendency to produce the present class of sediments, though they generally act by producing the crystallized sediments or gravel in those disposed to them, as will be stated more fully when we come to consider that form of sediment.

"*b.* Unusual or unnatural exercise of the body or mind, particularly after eating, and the want of proper exercise at all other times. It has been observed, that horse exercise is apt to produce a turbid state of the urine in those who are unaccustomed to it. I have also remarked, that exercise in general, whether bodily or mental, taken immediately after a principal meal, as after dinner, is almost invariably followed by a deposition of the lithate of ammonia from the urine. On the contrary, the want of active exercise after a certain stage of the digestive process has been completed, is very frequently followed by a similar deposition. I have likewise remarked, that even a moderate

meal taken after a day spent in close mental application, or complete bodily inactivity, is very frequently succeeded by the same event.

“c. Debilitating circumstances. To this class belong a great variety of unconnected events having no principle in common, except that, perhaps, of diminishing the vital energies, such as various medicinal substances; certain conditions of the atmosphere; also depressing passions of the mind, inordinate mental or bodily fatigue, long fasting, and a host of others which need not be enumerated; all of which, the quantity and quality of the diet, &c., remaining the same, will frequently occasion the deposition in question from the urine.

“Such are the principal circumstances which have been observed to produce these sediments in the urine. It is, I believe, the common opinion, that all such sediments indicate the presence of fever; and when fever occurs in healthy subjects from other causes, it is indeed accompanied by some form or other of these sediments: but whether the circumstances above enumerated always act by exciting real fever in the system is very doubtful, certainly at least such fever is often very slight, and by no means commensurate with the quantity of sediment that frequently appears on such occasions. That the organs of digestion and assimilation are somehow or other concerned in the appearance of these sediments there can be no doubt, and that these organs should be somehow or other affected by the circumstances enumerated, there can be no difficulty in conceiving; but with respect to the immediate nature of these derangements, we have no very distinct knowledge; and at present I have nothing to do with conjecture.”

The sediments are *yellow*, *red*, or *lateritious*, and *pink*. The *yellow* are the sediments of *health*, and are generally produced by errors of diet in individuals slightly dyspeptic. Children are very subject to this sediment; and it is frequently the forerunner of a calculus. The *red* or *lateritious* sediment is supposed to denote fever, and generally of an active inflammatory nature, and the deeper the *red*, the more severe in general are the symptoms. In gouty individuals this sediment is the lithate of soda, in combination with purpurate of soda. Besides gout, this sediment appears also in rheumatism and hepatic affections. The precipitate, made from the deep coloured urine of fever by means of a solution of oxymuriate of mercury, is chiefly lithate of mercury. The *pink* sediment is the most rare variety. It appears in the urine of dropsical individuals, or occasionally in that of hectic patients. Dr. Prout has also observed it frequently in the urine of persons labouring under chronic visceral affections, especially of the liver. We have known this sediment deposited from the urine long before the visceral affection became evident; and, when it appears in a patient supposed to be merely hypochondriacal, it behoves us to be on our guard, and to believe that the disease is not *imaginary*. In diseased states of the

kidney, even though fever is present, these sediments may not appear; and, in Dr. Prout's opinion, they show, at all times, that fever *has existed, and is going off*, rather than that it *exists at present*. He has seen perfectly *white* lithate of soda deposited from the urine, which resembled the phosphates; but the urine was *acid*. In such instances he suspected gouty irritation, or abscess in the kidneys.

As we have already said, crystallized sediments, or red gravel, consist of lithic acid, nearly pure. Their colour and appearance vary. In elderly people, lithic acid is sometimes passed imperfectly crystallized, in the form of small globules, like pin heads, or larger; and these globules are generally of a pale colour. We knew an old gentleman who passed smooth hard globules of a mahogany colour, and of the size of a mustard seed, soon after a contusion, where much blood had been extravasated. He had never been observed to pass any before that time, nor at any time afterwards.

"The general symptoms," says Dr. Prout "attending the appearance of crystalized lithic acid in the urine, are more or less of pain or uneasiness in the region of the kidney, with irritation, and sense of heat about the neck of the bladder and urethra. There is also a frequent desire to pass the urine, which is voided in small quantities at a time, and without affording the usual relief, the sensation still continuing of something being left behind in the bladder. The digestive functions also, as in most cases where urinary deposits are concerned, are considerably deranged, or very liable to be so, and the patient is frequently troubled with acidity of the stomach, flatulency, &c., particularly after any little error in diet, as the use of fruits, acescent wines, &c. The circumstances, however, under which lithic acid appears in the urine, and the constitutional symptoms with which it is associated, together with the tendency and danger of the affection, are liable to considerable modifications, according to the age of the patient; hence we shall consider the subject as occurring at four periods, viz. before puberty; between puberty and the age of forty; between forty and sixty; and in old age.

"Children in general, and particularly the children of dyspeptic and gouty individuals, or who inherit a tendency to urinary diseases, are exceedingly liable to lithic acid deposits in the urine. These appear not only under the form of amorphous sediments, as before mentioned, when there is seldom much irritation in the urinary organs, but frequently also in the form of crystallized lithic acid: in this case symptoms of irritation about the urinary organs may be always more or less observed, if the child be attended to. Thus there will be found to be a frequent desire to pass urine, which is voided in very small quantities, and with manifest uneasiness. The irritation about the urinary organs also frequently induces the child to wet the bed by night, &c. In such cases, if the urine be examined, it will be always found to be very

unnatural, and frequently loaded with lithic acid ; and should this prove to be the fact, the case requires immediate attention, as there is much greater risk at this period of life than at any other, of the formation of stone in the bladder."

From the time of puberty to the age of forty, there is a less tendency to the deposition of lithic acid than at other times ; but after the latter period, it begins to be deposited irregularly, especially in the indolent and luxurious. Sometimes a deposition of this acid will then give great relief to those who have been suffering for months and years, from various anomalous nervous affections and pains in different parts of the system, and from dyspepsia.

In old age, as we have said, the lithic acid is not produced pure :—

"In most of these cases," says Dr. Prout, "there is a good deal of pain in the back, and irritation about the urinary organs, even when the concretions are only a small size ; in others there is much less irritation under these circumstances than one could imagine. In all instances, however, this may be considered as a most dangerous state of disease, not only from the constant liability of the patient to the formation of renal or vesical calculi, which all other circumstances likewise conspire to render probable, but on the other hand, from the danger there is of suddenly checking the secretion of lithic acid, which is sometimes followed by great derangement of the general health and by apoplexy."

Dr. Prout now gives a full account of *a fit of the gravel*, during which, he supposes, a nephritic calculus is formed ; lithic acid being at such times separated from the kidney in the state of a semi-fluid hydrate, which becoming solid, gives origin to the calculus.

The constitution of many individuals is naturally disposed to produce these sediments. On the other hand, the disposition to generate them—

"In excess, is like gout, or rather simultaneously with gout, but too frequently acquired by indolent habits, and excess in eating and drinking. Most frequently, however, the tendency to these diseases is connected with some unknown causes, peculiar to certain districts or countries, as, for example, the district of which Norwich may be considered as the centre ; in which more calculous cases occur than in the whole of Ireland or Scotland. In such instances, the water, diet, temperature, &c. of the district, has been each accused, in its turn, of being the exciting cause ; and that hard waters, in conjunction with other favourable circumstances, have a great influence in producing this affection, I have no doubt. I have also, in one or two instances, seen a fit of lithic gravel induced in the predisposed, by sitting on a damp cold seat for some hours ; and sometimes a tendency to deposite large quantities of lithic acid is evidently connected with local injury or disease of the kidneys."

Amorphous sediments are more or less dangerous in proportion to their *whiteness* or *pinkiness*. When pale, they denote a tendency to the phosphates; and when pinky, there is generally an organic or other deeply seated disease. The frequency, and the greater or less quantity of the deposition, must also be taken into consideration. With regard to lithic acid gravel, it is seldom dangerous, *so long as it is not deposited while the urine is warm.*

The author next considers the means by which those diseases are to be counteracted.

"Errors in diet," he says, "from their being most liable to be constant, are of the chief importance; and the error of quantity in diet is of infinitely more importance than the error of quality. Any stomach may digest a little of any thing, but no stomach can digest a great deal of any thing. This is a maxim that ought to be universally borne in mind where diet is concerned, and is, in particular, of the very first consequence in the present diseases."

The patient should abstain from—

"Heavy unfermented bread, hard-boiled and fat puddings, salted and dried meats, acescent fruits, and (if the digestive organs be much debilitated) soups of every kind, &c. In general also, malt liquors and wines, particularly when of an acescent quality, should be avoided. Simple attention to these rules, with respect to diet and exercise, the ensuring a due performance of the cutaneous functions by wearing flannel (particularly about the loins,) the preserving a regular state of the bowels, and, perhaps, the occasional use of alterative medicines, are all that are commonly requisite in this form of the complaint, and will scarcely ever fail to prevent its terminating in serious consequences."

"It is in this form of disease," says Dr. Prout, that the use of alkaline remedies is, for the most part, particularly indicated. These, however, must never be trusted to alone, and to be really useful must be conjoined with other means, and especially with alteratives and purgatives. Thus the pil. submur. hydrarg. comp. or a pill composed of the pil. hydrarg. and pulv. antimonialis, may be taken twice or thrice a week, at bed time, and followed up the next morning by an active dose of the subsulphate of magnesia; or a mixture of Roché's salts and magnesia, or carbonate of soda. A little of either of these compounds may be also taken twice or thrice in the day, so as to keep the urine constantly neutral or alkaline, and the bowels freely open; or gr. x to xx of magnesia may be taken for the same purpose in a glass of soda-water, as often as it may be found necessary. At the same time, the use of hard waters, such, for example, as most of the pump-waters in and about London, should be particularly avoided."

The above plan must be persisted in *for a considerable length of time*, and it must be varied according to circumstances.

"There may be cases also where purgatives to such an extent as here recommended may be improper. Indeed in no instance ought they to be carried to excess, but should be so administered in the outset as to keep the bowels rather freely open, and no more; and as the disease recedes to insure their natural action.

"The above plan is particularly adapted for the preventing the effects of, and eradicating the disease in early life, when a tendency to it has been inherited, or is otherwise habitual; and, perhaps, it may not be deemed superfluous here to insist upon the absolute necessity there is for attending to the subject when children are concerned. In such cases it should be constantly borne in mind, that by proper care the formation of stone in the bladder may almost certainly be prevented, but that by inattention this dreadful occurrence is as certainly likely to take place; as I have seen happen, for example, when children, under such circumstances, have been sent to school and neglected."

"In a fit of the gravel, when the attack is acute, venesection or cupping from the region of the kidney, with active doses of calomel and antimonial powder (or omitting the latter if nausea be present, and substituting opium or hyoscyamus,) should be immediately had recourse to, and precede the use of diuretic remedies. When these have begun to operate sensibly upon the system, though, perhaps, before the purgatives have produced actual stools, the patient may have recourse to warm fomentations about the region of the kidneys, or, what is much better, the warm bath, and commence the use of the diuretic purgatives formerly mentioned, with the addition of colchicum: and these means, if judiciously and vigorously applied, seldom fail of removing the inflammatory or spasmodic action of the kidney, and of producing a flow of urine."

If the case be very obstinate, a large galbanum plaster may be applied to the lumbar region, or an issue or seton may be inserted in the neighbourhood of the kidney, with great advantage.

Oxalate of lime very rarely appears alone under the form of an amorphous sediment; and it is still more rare under the form of crystallized gravel. Twelve instances, however, of renal calculi of this sort, have fallen under the author's observation. He gives us the conclusions he was enabled to draw from those cases, and observes:—

"In all the instances in which I have myself had opportunity of witnessing this affection, the general health has been little affected, and the immediate attacks have been attended by considerable excitement, amounting in three of the instances to actual inflammation with fever, obviously requiring the treatment recommended in similar attacks where lithic acid was concerned, and which gave decided relief."

Our author can give little positive information with regard to the means of determining when this diathesis is going on in the system.



"But," he says, "if there be pain in the region of the kidney, and other symptoms of gravel, without any appearance of sediment, and if the urine be acid, and of the yellow tint above alluded to, the stomach deranged, and an inflammatory diathesis, either general or local (i.e. about the urinary organs), be present; and if all these are associated with suppressed gout, or tendency to cutaneous disease, the existence of this form of the disease may be suspected, and means immediately taken to counteract it."

When its presence is ascertained, Dr. Prout has endeavoured, in some cases, to *change the diathesis from that of the oxalate of lime to the lithic acid*; and the muriatic acid was chosen to effect this purpose. But this plan is not to be adopted rashly.

"The cystic oxide diathesis constitutes a form of urinary derangement still less perfectly known than that of the oxalate of lime."—"I have recently," says the author, "had an opportunity of seeing a case of this rare form of disease through the kindness of Sir A. Cooper, who sent the gentleman to me to have the nature of the stone he had lately passed from the kidney ascertained. This gentleman appeared about 30 years of age. He had been subject to urinary diseases since 1818, when, in consequence of exposure to cold, he was seized with severe pain, accompanied by inflammation of the kidneys. Six months afterwards he, for the first time, observed retention of urine, from what appeared to be calculus in the bladder, and in 1820, a stone was extracted from the bladder, which weighed upwards of two ounces. The nature of this stone does not appear to have been ascertained, but it was supposed to be oxalate of lime. The present small calculus, which consisted of pure cystic oxide, passed down from the left kidney about a fortnight before I saw him, with considerable pain. Since that time he had been taking alkaline remedies, which appeared to give him more relief from the severe harassing pain in the back than he was almost always subject to, than any thing else. The urine voided in my presence, about five p. m. was copious, of a yellowish green colour, and strong peculiar smell. Its sp. gr. was 1.020, and almost immediately on being passed a greasy-looking film was formed on the surface, and at the same time rather a copious pale-coloured precipitate appeared, and the urine became alkaline. This film and sediment consisted chiefly of the triple phosphate of magnesia and ammonia, mixed with a little of the cystic oxide. There was very little urea, and hardly a trace of lithic acid was perceptible, on the addition of an acid.

"The urine passed the next morning early (all medicine having been in the mean time omitted,) was more remarkable and characteristic, I presume, of this affection. Its colour and appearance were much the same as the above, except that the former was a little deeper, and the peculiar smell stronger. It very faintly reddened litmus paper, and its specific gravity was 1.022. There was a slight deposition on standing for some time, consisting of a mixture of the cystic oxide, with a little of the triple phosphate. A considerable proportion, however, of the

cystic oxide was precipitated from the urine on the addition of acetic acid, which of course held at the same time the phosphates in solution. This gentleman seemed strong and robust, but was liable to affections of the stomach which appeared to arise, in part at least, from sympathy with the derangement of the kidney. What is remarkable, he stated that he had a twin brother likewise subject to urinary affections, but of what kind has not been ascertained."

The disease is generally united with diseased kidney, and, in all cases, there is a disposition to morbid urine, probably inherited.

When he begins to consider the phosphatic, or earthy diathesis, Dr. Prout first of all speaks of the mode in which the other diatheses are changed into this: but our limits will not allow us to follow him through these changes.

*The crystallized sediments composed of the phosphates, consist almost invariably of the triple phosphate of magnesia and ammonia, and exist in the form of perfectly white shining crystals.*

"The constitutional symptoms usually consist of more or less derangement of the digestive functions, with much nervous irritation, and more or less of pain and uneasiness in the back or urinary organs, accompanied frequently with a sense of general lassitude and want of energy. The urine in this form of disease is generally abundant in quantity, and for the most part pale coloured (though there are exceptions to this), and upon standing for some time, an iridescent pellicle is frequently formed on its surface, which, upon examination, proves to be crystallized, and is composed chiefly of the salt in question. Minute crystals of this same salt also frequently attach themselves to the sides of the vessel in which the urine has stood for a short time. Urine abounding in this salt is also of considerable specific gravity, contains abundance of urea, and is very apt to become alkaline and putrescent.

"With regard to the causes of this deposition, any thing acting generally, and producing a nervous state of the system, such as the distressing passions, and particularly mental anxiety or fear, will frequently produce, in many people, an excess of this salt in the urine. The same is also true of many articles of food or medicine that produce a hurried secretion of the urine, and act as diuretics; as the neutral salts in some cases, and particularly the Rochelle salts and other saline compounds, in which the acid is of vegetable origin. So also a long continued use of alkaline remedies, or of mercury, in irritable habits more especially, will likewise produce a tendency to an excess of this salt, as well as of the phosphates in general, and even lead to an actual deposition of them from the urine. The same sediment also frequently abounds, or is easily induced, in the urine of those who have long been in bad health, and in whom the constitution may be considered as giving way, or to use a common expression, breaking up. In general it is to be understood that the slighter causes affect only the predisposed, and those in particu-

lar who are subject to other diseases of the urinary organs or urine. It may be also remarked, that children are more subject to this deposition than adults; a circumstance perhaps to be referred to the irritability of the system at this age, and the great derangement of the digestive organs to which they are subject.

“When this form of the disease takes place in advanced life, or is connected with organic disease; or when the recurrence is very frequent from the slightest causes, there is much more danger; and the latter in particular shows a tendency to the affection, which those who are liable to it will do well to look to, lest it should become permanent, in which state it is not easily conquered.”

*Amorphous sediments composed of the phosphates* consist invariably of a mixture of the phosphate of lime, and of the triple phosphates of magnesia and ammonia. They are attended by very distressing symptoms, which

“Consist in great irritability of the system, and derangement of the chylopoietic viscera in general; such as flatulency and nausea, obstinate costiveness, or peculiarly debilitating diarrhœa, or both frequently alternating; and the stools are extremely unnatural, being either nearly black, or clay coloured, or sometimes like yeast. These are always accompanied by more or less of a sensation of pain, uneasiness, or weakness in the back or loins. There is a sallow, haggard expression of countenance; and as the disease proceeds symptoms somewhat analogous to those of diabetes begin to appear; such as great languor and depression of spirits, coldness of the legs, complete anaphrodisia, and other symptoms of extreme debility: and the disease, if not speedily checked, seems capable of ending fatally. The urine in this form of disease is invariably pale coloured, and upon the whole voided in greater quantity than natural. Sometimes (generally I think by day,) it is voided in very profuse abundance, and in this case is of very low specific gravity, 1.001 or 1.002, for example. At other times it is voided in less quantity, and its specific gravity is proportionally higher, but it is seldom very high; that is, surpassing 1.025. In the former case it is generally perfectly pellucid and colourless, and deposits no sediment; in the latter it is sometimes opaque, when passed, and always after standing for a greater or less time deposits a most copious precipitate of the mixed phosphates, in the state of an impalpable powder. In all cases the urine is extremely prone to decomposition, becomes alkaline by the evolution of ammonia, and emits a most disgusting smell. To those who have never seen this condition of the urine, the above will furnish but a very imperfect idea. I trust, however, that the description will enable any one to distinguish such urine when they see it; and when they have once paid attention to its properties, they will afterwards readily recognize it.”

“A large proportion of these cases,” says Dr. Prout, “which have come under my own observation, has been distinctly traced to some injury

of the back. This injury has been of a character not very capable of being understood or described; but perhaps some idea of it may be acquired by my stating that, for the most part, it has arisen from a fall from a horse, in which the person has received a violent general concussion of the spine, and often at the same time some local injury about the back, but not of such a nature as to confine him long, or to lead him to think that he has received any material injury; and, generally, it has been quite forgotten, till the patient's attention has been called to the subject. Among the general exciting causes may also be mentioned severe and protracted debilitating passions, excessive fatigue, &c. The local causes are, generally, some irritation about the bladder or urethra, especially when operating constantly for a considerable length of time; as for example, any foreign substance introduced into the bladder, and producing irritation of that organ, including all sorts of calculi under certain circumstances; the retaining of a bougie or catheter in the urethra; strictures of the urethra in some rare cases, and in particular constitutions; all which, and many other similar causes, are capable of producing, in a greater or less degree, a condition of the urine more or less resembling that above described, and readily depositing the phosphates. Thus it has been long known that any foreign substance introduced into the bladder, almost invariably becomes incrustated with the phosphates, and not the lithic acid."

The prognosis, in general, may be considered as unfavourable, particularly if the cause be an injury of the spine. But this deposition very rarely gives origin to calculus of the kidney.

"*Treatment.*—The principles of treatment," says Dr. Prout, "in both those forms of affection are the same, and differ only in degree. The particular indications of cure seem to be to diminish the unnatural irritability of the system, and to restore the state of the general health, and particularly of the urinary organs, by tonic and other appropriate remedies.

"In severe affections, especially of the second class, opium, as far as my experience has hitherto extended, is the only remedy that can be employed with much advantage to fulfil the first indication. This must be given in large and repeated doses, such as from gr. i. to gr. v. or more, two or three times a day. Under this plan the more distressing symptoms will commonly be speedily relieved; and now, in conjunction with opium in more moderate doses (if the state of the disease will permit,) the mineral acids, cinchona, uva ursi, different preparations of iron, and other tonics may be had recourse to; or if the mineral acids should disagree, the citric acid may be taken instead. There may be also applied to the region of the loins a large pitch, soap, or galbanum plaster, which frequently seems to afford considerable relief to the pain there felt; or if the symptoms are unusually severe, and connected with manifest local injury, setons or issues may be instituted in the back. With respect to the bowels, it has been stated, that they are generally exceedingly irregular and difficult to be managed in this

form of disease. Most frequently they are constipated; but purgatives, especially of the more active class, must be given with caution. I have seen, for example, the most serious consequences brought on by a small dose of calomel, which, by inducing a diarrhoea, and consequent debility, has much aggravated all the symptoms, and endangered the life of the patient. Saline purgatives, more especially those containing a vegetable acid, as the Rochelle salts, the Seidlitz powders, &c. are also to be avoided, and recourse must be had to small doses of castor oil or laxative injections. Mercury in all its forms, and particularly when pushed so far as to produce its specific effects in the constitution, seems capable of doing a great deal of mischief when the phosphates are concerned, more especially in the severer forms of the affections: and if from other causes it be judged proper or necessary, as the least of two evils, to administer this remedy, its exhibition must be managed with caution, and its effects closely watched. Perhaps the best mode of exhibiting it in such cases is to combine it with opium, or with a purgative in some instances. I cannot help thinking, however, that in very severe forms of the affection, its use had better be omitted altogether, till the more distressing symptoms have somewhat yielded, and the patient has recovered a little strength.

"Alkaline remedies of every description must be carefully avoided; their use in every point of view being most mischievous when the phosphates are concerned. Indeed, all remedies which act as diuretics, should in general be shunned; and the patient should be prohibited from drinking too much. With respect to drinks in general, they should be of a soothing demulcent character, and prepared with distilled, or the softest water that can be procured, as hard waters are literally poison in this form of disease."

In less severe cases, opium to a great extent is seldom necessary or proper. Here, hyoscyamus, combined with the extract of uva ursi, is an excellent remedy. A strong infusion of the *alchemilla arvensis* is also useful. In children, several purgative doses of calomel and rhubarb are often of much service. The author approves of an animal diet, but he thinks, in all cases, *that* diet is most proper which agrees best with the patient. Soups, or a watery food, should be used sparingly. But, above all things, the mind should be kept tranquil.

Corroborative of this treatment, we are furnished with a few cases, which sufficiently show the absolute necessity of perseverance in the use of remedies. We have room only for Dr. Prout's concluding remarks.

"In conclusion," he says, "perhaps it may not be deemed superfluous to draw the attention of the reader once more to the important facts already mentioned, and sufficiently established by these cases; namely, that although all the other forms of urinary deposition converge, as it were, towards the formidable state of disease we have been

considering, (which may, therefore, be viewed as the last and worst state of things;) yet if the original cause of irritation can be mitigated or removed, a healthy state of the urine may be again reproduced, and the patient will thus recover. But on the other hand, if this cause be of such a nature that it cannot be mitigated or removed; or if the disease when once fairly established be permitted to proceed unchecked, or be combated by inefficient or irrelevant treatment, the patient will be doomed to much misery, and his recovery will be exceedingly doubtful."

The remainder of the volume is employed upon the *mechanical and organic diseases of the urinary organs*; among which, urinary calculi of the kidney and bladder hold a conspicuous place. We have room but for a very few extracts.

Under the head of Cystitis, &c. we find the following observations:—

"In gouty individuals, who have likewise suffered from urinary derangements, a severe affection, ultimately involving the whole urinary system, and which, for want of a better name, must be termed inflammatory, though the circumstances attending it differ altogether from those of common inflammation, sometimes occurs. Hitherto I have only seen this affection take place after an irregular attack of gout. It commences with slight rigors, followed by feverish exacerbations, and accompanied by unusual prostration of strength, and mental depression. These symptoms of constitutional derangement soon assume a more violent character, the pulse becomes excessively quick, the skin hot and dry, the stomach oppressed with nausea and vomiting; there is a tendency to delirium, and, in short, to all the symptoms of irritative fever of the most formidable kind. At this time the secretion and excretion of the urine are not apparently affected; and the patient, though repeatedly urged on the subject, declares he has no pain, either in the urinary system or elsewhere, nor does he complain when examination or pressure is made. These symptoms go on increasing in spite of every remedy, when at length the external organs sometimes become tumid, and retention of urine, more or less complete, is perceived for the first time. The powers of the patient now sink rapidly, the whole tumid urinary organs acquire a dull livid hue, and death speedily closes the melancholy scene.

"In the two or three instances of this most dangerous affection that have fallen under my observation, its general symptoms and progress have been as above described, though some of the subordinate symptoms have varied according to the constitution and circumstances of the patient; and in one case in particular, the evidence of the affection of the urinary system was more unequivocal from the beginning, though it was not attended, even in the latter stages, by any very remarkable tumid state or lividity of the external organs. With respect to the nature of this affection, some may, perhaps, think it of a gouty character. Whatever may be its nature, the inflammatory action seems, if it

be not originally of that character, to very speedily assume the atomic form; and were I required to point out its analogies, I should say, that it more closely resembles that most dangerous form of inflammation termed diffusive or erysipelatous, than any thing else that I am acquainted with. I can give no account of the appearances after death in this affection, though from what I have seen I can scarcely conceive recovery from it possible."

In the following passage, which is worthy of Sallust, the author points out the distinction betwixt spasm of the bladder and cystitis.

"Cystitis," he says, "is accompanied by all the symptoms of fever, while spasm is not. Pressure increases the pain of cystitis, but not of spasm. The pain is unceasing in inflammation—that of spasm comes on in paroxysms. The pain in cystitis is burning, throbbing, or lancinating; in spasm it is oppressive, dragging, and resembling labour pains. The constitution of the patient should also be taken into account; in the robust and sanguine, cystitis is the most probable disease; in the weak and nervous, spasm."

Speaking of Solvents for the stone, he observes:—

"When the first edition of this work was printed, I knew nothing about the matter, and, therefore, avoided it altogether. Since that time I have seen two or three attempts made to dissolve the stone by injecting the solvent into the bladder. The results, I am sorry to say, were by no means such as to impress me with any favourable notions of the general practicability of this plan; and, indeed, when the very weak state of the solvent that can be thus employed is taken into account, the consequent length of time necessary for continuing the experiment, and above all the refractory nature of certain calculi, I confess I am very much disposed to doubt if any solvent at present known, can, in the great majority of instances, be ever so administered as to produce the desired effect: and this I believe is the general opinion on the subject. With respect to the action of solvents taken by the mouth, I have at present still less faith. Nothing, however, is impossible; and I am willing to encourage the hope, that hereafter some more efficacious means than any that have yet been attempted will be discovered."

In the author's *recapitulation of practical rules, &c.* we find the following notice under the head of Hæmaturia:—

"One of the most formidable cases of hæmorrhage from the kidney that I ever saw, and which baffled for a long time every means that the most experienced practitioners could devise, yielded almost immediately to colchicum, and the use of a strong infusion of uva ursi, and the gentleman continued tolerably free from the affection for nearly two years; latterly, however, it has returned again in a slight degree. The cause of the affection in this case was very obscure, as there were no symptoms of calculus in the kidney, nor did he inherit gout, though he had,

one very slight attack of this just before I saw him, which led me to recommend colchicum. In another very severe case of this description, the above remedies, and every thing else that could be thought of, failed. This gentleman was in the prime of life, and had for some time suffered almost constant pain in the region of the kidney. He resided in the country, and a short time after I last saw him, died rather suddenly, but from what cause I do not know. In this case I think it very probable, that there was some very extensive disease in the kidney, probably of a fungous character, as he never had been subject to calculous affections, and could not trace the affection to any particular injury, &c. In another instance of obstinate hæmaturia, the bleeding was constantly preceded by a shivering fit."

We wish we could have made some extracts, under the head of "Pains in the back and irritable bladder;" but we must stop here, having already, we trust, given a sufficient number of extracts to show the value of the work, and to make the reader desirous of possessing it. The work, indeed, deserves the patronage of the profession; for it not only throws light upon a dark subject, but evinces a patient and unwearied assiduity in experiment, and a zealous activity in the pursuit of truth. The author's style is sometimes careless, but it is always perspicuous, and even, occasionally, almost elegant. It might, however, in some passages have been a little more concise. Yet, in the account of the mechanical and organic diseases, we cannot help thinking that too many subjects have been huddled into a too narrow space.



**QUARTERLY HISTORY**  
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**I. ANATOMY.**

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**M. REIL** on the *Preparation of the Cerebellum for Dissection.*  
—The cerebellum of a male should be selected, and of one who may have died in early manhood of some chronic disease; it should be in as fresh a state as possible; the brains of those who have died of typhus lose their consistence too soon for this purpose; and where inflammation of the brain has existed the membranes are not easily separable. The cerebellum may be detached by dividing the crura cerebri above, and the medulla oblongata below: it should then be placed in a basin under water, and the membranes removed with the forceps: the membranes are prevented from drying, and the blood exudes more freely when the part is thus immersed in water. The denuded cerebellum is now to be placed in a vessel, and to be twice washed by the affusion of brandy, which may be suffered to remain on it some minutes; afterwards alcohol is to be substituted, in which it should be twelve hours. When in this way, the surface is somewhat hardened, the membrane is to be removed from the deeper furrows, in order that the spirit may everywhere penetrate the mass: the spirit is then again to be poured over the preparation, which may stand a day or two. Finally, the alcohol is to be renewed, and the vessel closed and set by two or three months, till the part has acquired a greyish colour, and is thoroughly hardened. It is right, during this time, to turn the preparation occasionally, and to contrive that every surface of it is freely bathed in the spirit.

Dr. C. H. PARRY on *Anatomical Systems*.—"In describing the anatomical structure of the animal frame, authors have pursued different modes, suited to the several purposes which they have in view in their respective works. The far greater number, influenced probably by the consideration of the mere mechanical structure, as it first occupies the attention in the carcase divested of life, have begun with describing the bones, which appear to be the basis of strength, and permanent form and symmetry to the softer covering or contents. Thence they have proceeded to the muscles, of which they have noticed the origin and insertions into the various bones, and thus have gone on with detached, and as it were, insulated descriptions of the circulating system, the brain and nerves, the organs of sense, the viscera, and other parts. Having thus ascertained the minutiae of mechanical structure, they have supposed the animal endowed with life, and investigated the various functions of vitality, with reference to the several parts of the whole machine. This has been the mode chiefly pursued by lecturers on anatomy and physiology, who would indeed, be in a great measure disqualified from a better and more philosophical order, by the difficulty of obtaining fresh subjects for the requisite demonstrations.

"In this method, however, the great relation between the structure and functions being originally kept out of view, not only is the anatomical part in the greatest degree dry and uninteresting; but on account of this defect of association, it becomes infinitely more difficult of recollection, and is forgotten when we come to that stage of inquiry where alone it is useful in its application to the performance of the functions, whether in health or disease. Hence, it follows, that when the functions themselves come under investigation, much repetition is unavoidably required.

"Far more lucid and satisfactory is the order observed by the great Haller; who, considering the mechanical structure of the various parts as subservient to the several functions of life, first describes those parts, then announces the phenomena, and lastly, inquires into their relations, as to cause and effect. In this manner, having begun with the elements of the animal frame, he describes the structure of the parts concerned in the circulation, whether sanguineous or lymphatic; then recounts their several phenomena, whether actions or affections; and afterwards shews their relation and mutual dependence. His second subject is that of Respiration, its organs and phenomena; together with its dependent processes, the voice and speech. Next in order is the description of the brain, spinal marrow, nerves, organs of sense, and muscles; with the phenomena of sensations, intellectual powers, motion and sleep. The author then proceeds to the parts concerned in the functions of nutrition and of evacuation, in which are comprehended the greater number of the abdominal viscera. He next describes the structure of the organs of generation, and at great length investigates that important subject; the first existence, nutrition, growth, structure, and birth

of the new animal; whom, lastly, he conducts through its different stages of growth, to maturity, decay and death.

"This work is a most stupendous production of human industry and science. When we consider the state of Physiology at the period when it was written, loaded with the false analogies of chemistry and mechanics, or trembling amidst the opposite, but fanciful theories of Stahl, we cannot but be astonished that the author has so uniformly escaped the prevalent infections of vague hypothesis, and conducted his inquiries in a manner so conformable to the laws of true philosophy, both in anatomy and physiology. We owe to him many important discoveries, and in the whole field of physiological science, which had at that time been opened by others, there is scarcely a path, however minute, into which he has not travelled. Nothing can exceed his sagacity in distinguishing between the true and false, but his candour in acknowledging that which he does not know; and it is not the least of his merits, that what he does not fully or accurately explain, he affords the means and the disposition to inquire.

"In this great work it may be considered as a defect, that it contains no account of the structure of the bones, or of their several relations to the soft parts; a defect which is considerably felt in the application of these first principles to pathology and therapeutics. I doubt, however, whether the same imputation does not equally attach to most succeeding writers on this subject.

"The great discoveries which have been made in chemistry, since the days of Haller, have opened to physiologists new views of their connexion with some of the most important functions of organic and animal life. Various other experiments and observations on the economy of animals and vegetables, have also been made; which have either been new, or led to the establishment or connexion of former opinions.

"Of these, as well as of the more recent anatomical discoveries, there is a very compendious, yet concise and accurate, view in the work of Soemmering *de Corporis Humani Fabrica*, in which the author treats the subject in the following method:—1. Osteology; 2. Syndes-mology; 3. Myology; 4. The doctrine of the Brain, Spinal-marrow, and Nerves; 5. Angiology; 6. Splanchnology.

"Although this work is excellent in its kind, and comprehends a very large proportion of what was previously known on the subject on which it treats, together with some discoveries, or ingenious surmises, of the author himself, it must be acknowledged that, in point of scientific arrangement, it is much inferior to the physiology of Haller; and that some of its divisions imply a previous knowledge of other parts not already discussed. Thus, in the myology, there is a disquisition on what is called voluntary motion, which depends on the agency of the brain and nerves, the doctrine of which is not considered till the succeeding volume. Neither is the author without some fondness for such an innovation in names as, while it renders the work more obscure, may occasionally subject him to a just charge of affectation. Thus although

there is no great harm in substituting the term *conarium* for pineal gland, and *hypophysis* for pituitary gland; and although there is some science in employing the term *epistropheus* for *vertebra dentata*, I see no adequate reason why the right hemisphere, or why the *crista galli* is not as good a name for the sharp vertical prominence on the inside of the ethmoid bone, as *erista interna*.

"Of the difficulty of arrangement, so as to comprehend the consideration of all the phenomena in their due relations, and yet to avoid repetition, no stronger example need be adduced than that of Bichât, an author of singular acuteness and ingenuity; and who, if he sometimes errs from haste, is generally elaborate and original; and who, unfortunately for science, was by a sudden and accidental death snatched from the world at that age when judgment begins to triumph over imagination. Of this writer we have three distinct works; the first of which, entitled "*Recherches sur la Vie et la Mort*," professes, as it implies, to distinguish, class, and explain, the various phenomena of life and death. As, however, it is almost wholly physiological and pathological, including scarcely any consideration of the structure of the part, I shall reserve to another place the analysis of its contents and opinions."

*M. Bogros on the Structure of the Nerves*.—The author of this Memoir observes that two substances enter into the composition of the nerves—the neurilema, composed of cellular tissue, and the medullary fibre. The ganglia are considered as composed of two parts: the medullary threads, in fact, penetrate into them, are stripped of their neurilema, are rolled up, and (as it were) united together by a particular substance, sometimes greyish, at others yellow or reddish. M. Bogros subjected the nerves to new experiments; from which it results, that, independently of the neurilema and the pulp, a central canal is to be recognized. With the assistance of tubes, nearly resembling those by which mercury is injected into the lymphatic vessels, but with finer points, he succeeded in injecting the nerves. No preliminary preparation is required for the experiment; it was even performed upon living animals.

M. Bogros found that when a nerve is pierced by the point of a prepared tube filled with mercury, the injection runs through all the filaments furnished by the nervous chord, to their furthest extremities; it may be traced in the papillæ of the skin, the mucous membranes, and muscles; the injection also extends itself towards the origin of the nerve; and lastly, when thrown into a single filament, it always extends to several others, by means of anastomosing canals. If, after having injected the nerve, it is cut, a round and regular opening is to be observed in the centre of the pulp; and, even without the injection, if the centre of the pulp is carefully examined, an obscure point may be seen—that is the opening above-mentioned; and, by placing the point of the tube in this place, the nerve is injected.

When a nerve is deprived of its neurilema by nitric acid, similar results are obtained: when, on the contrary, the pulp is destroyed by an alkaline ley, injection is performed badly; it stops, and does not present

the same regular and cylindrical aspect. If spirits of turpentine are injected, and the nerve is then dried, the structure of the canals is visible to the eye. Mercury flows through the filaments of the great sympathetic nerve, and shows canals similar to those found in the other nerves. Thus, an injection thrown into the inferior cervical ganglion has penetrated through the cardiac nerves to the heart; and, from the great sympathetic, it has reached the semilunar ganglion, and the branches that extend from it. When the injection reaches the ganglia, they swell, and present the appearance of a number of canals communicating with each other, and turned and twisted upon themselves. The injection of the intervertebral ganglia takes place in a peculiar manner: they swell immediately; afterwards the injection penetrates into the venous network, situated between their proper surface and the covering with which they are furnished by the dura mater, and thence into the veins of this membrane itself. At last, the injection is seen to pass across the roots, and to fall into the cavity of the dura mater; a result which arises either from ruptures easily made in this point, where the pulp is very soft, or from this effusion taking place through natural openings. An injection cannot be thrown into the roots, nor a portion into the spinal marrow: it could not pass above half an inch when the pulp was torn, from whence resulted an opening through which the mercury escaped. The injection penetrates into the veins sometimes, but never into the arteries or lymphatics. The anastomoses take place by the meeting of the medullary canals, or by a confusion of the pulps: where they take place, the nerve increases in size.

The injection has been performed on living frogs. At the beginning, convulsions were produced; when it was finished, a perfect paralysis was produced. These experiments have been repeated on the four classes of vertebrated animals. In an anatomical point of view, this discovery is very valuable; physiologically, the existence of a canal in the nerves opens a vast field of inquiry; and as there is a law in the animal economy, that every cavity which is not lined by a mucous or serous membrane, is closed by an adhesion of its sides, if it is not preserved by the presence of some other body, is it not, therefore, probable that the medullary canal serves for a kind of circulation?

MR. DERMOTT'S *Lithographic Illustrations of the Arteries*.—These plates, which are intended to explain the relative position of the arteries connected with aneurism and other surgical operations, appears to us to be no less accurate than useful. They do much credit to the author, who is one of our Metropolitan lecturers on anatomy.

MR. MAYO'S *Course of Dissections for the use of Students*.—This little work is intended as a text book for the author's pupils, and may be recommended for accuracy and perspicuity of detail. Works of this description have greatly multiplied of late, demonstrating the increasing popularity of anatomical studies.

## II. PHYSIOLOGY.

### M. DEFERMON on the Section of the *Pneumogastric Nerves*.—

We think that the following conclusions of the learned Editor of the Bulletin, are more likely to prove correct than those of Dr. Wilson Philip upon the same subject. From experiments on various animals, M. Defermon says, he has uniformly observed that there was little difference in the duration of life, whether the continuity of the nerve was re-established after its section by means of a good or a bad electric conductor, or whether it was not established at all. He also uniformly observed :—

1. That in the two cases, digestion always took place, and that the differences of digestion and respiration seemed to be proportional to the sufferings the animal had undergone in the operation.

2. When digestion appeared to be most advanced, the animal had sustained the least injury from the section; and large animals lived longer than small ones, which were very speedily seized with asphyxia.

3. The more the lungs are gorged with blood, the more rapid is the asphyxia, and the less advanced is digestion. That is, the alimentary substances in the stomach are very little altered, and little moist, inducing us to think, that the fibres of the great sympathetic running to the stomach, must have some influence upon the quantity of the gastric fluids, which, according to the experiments of MM. Leroyer and Prevost, are indispensable to digestion.

4. Mechanical irritation of the inferior part of the pneumogastric nerve did not appear to accelerate digestion; or render it more complete.

5. In causing a galvanic current to pass after the section of the pneumo-gastric nerves, the gorging of the lungs is retarded, and the food contained in the stomach is sensibly different from that in the stomach of animals, on which the section has been performed without the galvanic current.

6. All these circumstances, important as they seem, are only accessory: the real differences depend on the quantity of gastric fluids flowing into the stomach; and the younger the animal is, that is submitted to the experiment, the more copious these fluids will be.

7. The wrinkles of the stomach indicate that much fluid is poured into it during digestion. We can at pleasure produce these wrinkles, by swallowing seltzer, or soda water, a fact

which proves that they depend on the presence of the gastric juice.

*Experiments by FICINUS and PRINZ on the Injection of Air into the Veins.*—Professor Waldinger in his Memoir, “*Ueber die Nahrungs und Heilmittel der Pferde*,” has related many experiments, in which he injected various gases into the veins of horses, and other large animals without much inconvenience. Oxygen and atmospheric air could be supported in a considerable quantity; azote and hydrogen produced more or less inconvenience; while carbonic acid gas always caused death. The text books, however, continue to repeat that air injected into the veins of animals uniformly causes death.

In order to establish the facts upon which this doctrine rests, Professors Ficinns and Prinz, of Dresden, repeated the following experiments. 1. On the 18th of December, 1824, at four o'clock, *p. m.* they opened the left jugular vein of a horse, and injected, by means of a bladder and tube 54 cubic inches, (Paris measure) of atmospheric air. Before the injection the pulse was 44, and the respiration 18 per minute; after the injection the pulse rose to 67-68 and 70, and the respiration to 48. The horse was laid down, after which the respiration continued the same, but the pulse sunk to 57. The horse was raised, and remained restless, but gradually recovered, and by ten o'clock—six hours after the injection, was perfectly well. 2. On the 28th of December, 1824, an equal quantity of oxygen gas was injected into the jugular vein of the same horse, when the pulse was 30, and the respiration 12 per minute. Immediately the pulse rose to 64, and the respiration to 40 and 44, with short palpitations of the heart. The animal, however, remained lively and well. An hour after the injection the pulse fell again to 38, and the respiration to 14; and in two hours the animal was in its natural state of health. Dr. Erdmann, who gives these details, does not mention whether the injection was made quickly or slowly, circumstances which would considerably affect the phenomena.

*HOPLEY'S Syphonic Theory of the Circulation of the Blood*\*.—The following extracts will give our readers a notion of Mr. Hopley's views, respecting the circulation of the blood, which appear to us, to say the least, to be ingenious and perspicuous.

*Atmospherical Pressure.*—“Although the influence of atmospherical pressure is principally noticed or observable in the large veins near the heart; it acts upon the whole body, equally upon the deep-seated vessels as those upon the surface; it is overcome by the power of the

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\* The Syphonic Theory of the Circulation of Blood, &c. BY EDWARD HOPLEY, Surgeon, R. N. pp. 40. 8vo. Longman, and Co., London, 1825.

heart in the forward or arterial circulation; and acts not only without control but with assisted powers, in the backward, or the return of blood by the veins to the heart. Nature abhors a vacuum, and in consequence of the action of the ventricles according to the present notions respecting the circulation; either a state of collapse must somewhere be the consequence, or Nature must deviate from her established rules: I hope to be enabled to shew that neither takes place, to prevent which we have to notice a number of contrivances. Let it be understood that in the whole body no vacuum can be formed; if twelve cubic inches of blood were drawn from the arm, the external dimensions of the body would be lessened exactly twelve cubic inches; again, if twelve cubic inches of food were taken into the stomach, the body would be increased in size exactly twelve cubic inches, also if any given portion of the contents of the body be moved from its place *within the body*, the external dimensions of the body will undergo no alteration respecting size, it being increased exactly as much in one part as decreased in another; which would not be the case were it possible to produce a vacuum.

*Explanation of the Circulation.*—In order to bring the blood through the large veins to the heart, Nature has introduced many wonderful contrivances—the pressure of the atmosphere; the resisting formation of the chest; the elasticity of the lungs; the action of the diaphragm; muscular action; and the *vis a tergo*, originating in the propulsive action of the heart and arteries; are all necessary to the production of this phenomenon: and it is in consideration of these conjoint circumstances that I am borne out in the assertion that our reasoning powers must do more for us than direct experiment.

“To proceed in the explanation of this intricate operation. Say that the ventricles at every contraction throw out four ounces of blood, that is, two to the systemic and two to the pulmonic circulations; nothing can be more certain than that the space occupied by the ventricles must be less than it was before their action, in the direct proportion to the quantity thrown out. By what means then is a vacuum prevented? Partly by drawing towards them the blood which is the least resisting substance, and partly by the natural elasticity of the lungs: for the auricles which had contracted to fill the ventricles, having ceased their action, become again distended by the contraction of the ventricles. Thus the suction power of the heart does not operate to fill the ventricles by any inherent elasticity possessed by them, but by first assisting to fill the auricles, which in their relaxed state become not only the least resisting point, but from the natural elasticity of the lungs, in a certain degree also a drawing power. And here we may notice why the force of the auricle is so very inferior to that of the ventricle, namely, because its office is only to fill the ventricle, (and which by the bye, as I have endeavoured to explain it, from the natural elasticity of the lungs, is, as it were, prepared to be filled) whereas it is the office of the ventricle to distribute the blood beyond (if I may be allowed the expression) even the most remote parts.



"It is evident that the parts contiguous must follow, and recede from the contractions and dilatations of the auricles and ventricles, and to the performance of which the lungs are admirably adapted, both from their natural elasticity and the increase of it by the air contained in their cellular structure. It is evident also, that the lungs having been drawn somewhat out of their natural situations by the contractions of the auricles and ventricles, must, from their great spring and elasticity, again assist in the distention of both auricle and ventricle: let me be plain. I mean also by the power of suction. This power of suction is in the heart and also (as I have endeavoured to explain) in the lungs; in other words the pressure of the surrounding atmosphere is not confined to the chest, but extends to the most remote parts; and this it is that, by pressing upon the whole surface, facilitates the return of the blood, and preserves the circulating system in exact balance.

"Something more should be said respecting this balance of the circulation, the necessity of which must be apparent to every one, but about which there rests some degree of obscurity. What are the great opposing powers in the circulation? According to the theory produced as above, we would answer the question by stating them to be *the heart and atmospherical pressure*. It may be observed, but this remains to be proved. I will readily grant that it does, but as I am reasoning from positions of my own, I must crave permission of the candid reader to indulge me a little more in what I should hope may not be thought unworthy of regard. Say that the great opposing forces reside in the heart and atmospherical pressure, we would naturally look for the balancing power in some interposing force, or intermediate situation. Again, it would be necessary that the possibility of assisting or counteracting both powers should be apparent in the balancing medium: and these circumstances are remarkably conspicuous in the action of the arteries. We see them offering an opposing force to the action of the heart in the great strength of their coats, assisted by atmospherical pressure. We see them by their elasticity and muscular contraction, aided by atmospherical pressure, and the opposition offered to the return of the blood by the semilunar valves producing a force in aid of the heart's action. We see them by their natural elasticity, recovering from their muscular or forced contraction, and aided by the power of the heart opposing atmospherical pressure; and again, by their propulsive action, assisting atmospherical pressure in the backward or venous circulation. Thus we find the arteries remarkably assisting, and opposing both of the chief agents of the circulation. I believe it will be manifest that the great balancing power of the circulation resides in the arteries; but must also remark that the harmony of the circulation; the close connexion existing between the different portions; and the mutual assistance afforded to each other, form a sort of balance in themselves; and at any rate must be a great help to that which I have attempted to describe as the principal one.

"I have not noticed the capillaries as aids or agents in the circulation, as their modes of action seem to me to be very imperfectly understood.

I know that a high office in this respect has been assigned them, but I believe upon slender foundation; and yet that their functions are very important in the animal economy no one can doubt, when he considers that the various secretions, such as the sweat, the urine, the lymph, &c., are somehow intimately connected with their operations; and which I should apprehend to be rather against the supposition of their affording any very active assistance to the circulation; having offices of such vast consequence in the animal economy, and peculiar to themselves.

"Thus we have seen the circulation of the blood divided (and I think naturally) into the forward or arterial, and the backward or venous; the forward conducted by the heart and arteries, which having by their power overcome atmospherical pressure, and forced their contents through the capillaries; the latter commences, conducted principally by atmospherical pressure, and assisted here not only by several of the powers which I have denominated *lesser aids*, but also by the *vis a tergo*, a force produced by the very power which has previously operated to overcome it."

ROLANDO'S *Experiments on Generation*.—This Italian experimenter, whose name is well known from his having claimed the discovery of some curious facts relative to the nervous system, has lately turned his attention to the obscure subject of generation to determine as far as possible the changes which take place in the vascular system, before and after conception. His experiments have led to the following conclusions, which are considerably different from former theories:—

1. Before conception there exists in the ovary a tissue of capillary vessels, or rather a vascular spongy disc, which is the first rudiments of the vascular system in the foetus.

2. The act of fecundation gives origin to a substance whose organization becomes the nervous system of the foetus.

3. The first change indeed depends on the action of this system, by means of which a small vessel changes into the left auricle and ventricle of the heart, and afterwards acts visibly on the new organization, and constitutes the structure of the foetus.

4. In the same way the right auricle and ventricle are produced.

5. By increased action in these small vessels, they change by degrees into nervous and arterial trunks of greater magnitude.

6. What Haller called the *sacculus vitellarius*, should be considered as the rudiments of the alimentary canal, and its adjuncts.

7. The common integuments, as well as the membrane of the amnios, originate in a simple vessicle.

8. M. Rolando is of opinion that he has clearly proved all these doctrines, and considers that this view of generation is quite ade-

quate to account for the origin of monstrous births, in consequence of accidental irregularities in the vessels of the ovary, or in the rudiments of the nervous system, or both at the same time.

These explanations, or references, do not appear to us to throw much light on the process of generation, and leave all the doubtful and obscure points precisely where they were.

**DR. STEARNS on the Spleen.**—The following account of the spleen is much of a piece with Rolando's remarks on generation; but we think it advantageous to the advance of medical knowledge even to show the limited views which prevail on obscure subjects.

"The indeterminate use of the spleen, and the tributary aid which it yields to the liver, in the formation of bile, render it necessary to bestow a few remarks upon this organ. The capacity of its blood vessels, the red colour of its blood, and its general aspect, gave origin to the ancient opinion, that the chief use of the spleen was to impart the red colour to the blood. But when the liver and spleen were found to be affected at the same time with similar diseases, and an unusual quantity of blood conveyed from the latter, by the splenic vein into the vena portarum, the former yielded to the more correct opinion, that the spleen was subservient to the liver in the formation of bile.

"The late Professor Rush considered the spleen as merely designed to receive the superfluous blood, when its preternatural accumulation in the vessels might hazard the safety of other parts more sensible to its effects, and therefore denominated it the waste-gate of the system. Contemplating the anatomical structure of the spleen, the magnitude of its blood vessels, their tortuous and minute ramifications, and its occasional enlargement when distended with blood, without sustaining the least injury, we are inclined to adopt this opinion. Yet that this should constitute its only use, appears inconsistent with the laws of the animal economy, the important connection of its blood vessels with those of the liver, the relative situation of these organs, their mutual sympathy, and the general opinion of physiologists. These considerations afford strong grounds to believe that the spleen becomes a reservoir for the occasional accumulation or diminution of blood in that viscus, according to the requisitions of Nature, for the supply of bile. Every excitement of the liver, by the presence of food in the stomach, by contagion, by miasmata, or by any violent exercise, fills the spleen with blood, and produces a correspondent secretion of bile. If no reservoir of blood had been provided for such emergent calls, the secretion of bile would have been diminished at the very time when its copious discharges were most needed. Those stimuli, therefore, which increase the secretion of bile, also accelerate the circulation, and fill the spleen with blood. If this reservoir had been located in those organs which have other functions to perform, their operations must have been occasionally interrupted by an excess or defect of blood. The wisdom of

the Creator is, therefore, conspicuous in providing an organ whose operations are exclusively destined to this end.

"The subserviency of the spleen to the liver, and their mutual connexion, are further evinced in the diseases which the morbid affection of one produces upon the other. Dissections shew that an indurated contracted liver precedes an enlarged spleen. This has been explained by Morgagni and others, by ascribing to the contracted and unyielding vessels of the liver, an obstacle to the usual flow of blood from the spleen, while an increasing quantity continues to enter it by the splenic artery. An accumulation of blood and the consequent enlargement of that viscus, become the necessary result. The same author found an enlarged liver generally to accompany an enlarged spleen, which has been confirmed by more modern dissectors. It was a common opinion among the ancients, that a diseased liver always preceded dropsy, and that a morbid state of the spleen soon afterwards succeeded. Although modern dissections do not confirm the order of this affection, yet in every case of established ascites, one of these viscera has been found diseased. It was for this reason that Albertini considered this species of dropsy incurable."

**M. LASSAIGNE** on the composition of *Arterial and Venous Blood*\*.—The following are the results of M. Lassaigue's Chemical Analysis of Venous and Arterial Blood. The experiments were made on the blood of a full-grown healthy dog. Arterial blood he found to contain 89,8 of water in 100 parts of serum; 88,5 of albumen in 100 parts of dried serum; 11,7 of salts in 100 parts of dried serum; and 2,09 of fibrine in 1000 parts. Venous blood gave 84,3 of water in 100 parts of serum; 87,5 of albumen in 100 parts of dried serum; 11,5 of salts in 100 parts of dried serum; and 2,10 of fibrine in 1000 parts.

**M. AZAÏS' View of Physiology**†.—This we consider to be the *ne plus ultra* of trifling absurdity. The author says health is a genuine concert, each organ being in reality, and without metaphor, an elastic instrument, in constant vibration, the particular play of which produces a concord with the others. When any one of the organs goes out of tune, the general harmony is interrupted, and disease ensues. It is needless for us to go farther in the development of the views of M. Azaïs, who has been silly enough to adopt poetical analogies for sober facts.

**M. HENSZLER's Physiological Anatomy**‡.—From an examination of the opinions of Harvey, Descartes, Bach, Leuwen-

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\* Journal de Chimie Méd. Jan. 1825.

† Cours de Philosophie Générale. Par. M. Azaïs, 8 vols. 8vo.

‡ Neue Lehrein Gebiete der Physiologischen Anatomie. Von Dr. Ph. Henszler. 1. Tom. 8vo. Nuremberg, 1825.

hoek, Ruysch, Haller, Bichat, Meckel, and Harless, respecting the ultimate ramifications of the vascular system, Dr. Henszler concludes, that the arteries are immediately changed into veins in all parts of the body, which he says is proved both by injections, and the examination of transparent parts under the microscope. The arterial system, he says, bears a similar relation to the lymphatics, as he has demonstrated by injections. The points of immediate re-union of the two vascular systems are more or less numerous, according to the organs. The continuity of the veins and lymphatics has been perfectly demonstrated by the injections of Tiedemann and Fohmann, which are much admired by the author. He rejects, therefore, the capillary system, which has by some been supposed to unite the three others. All vessels carrying yellow or white fluids, he considers lymphatics, and he thinks also that some portions of both the arterial and venous systems terminate in free orifices in the manner of lymphatics; for without this, nutrition, he thinks, could not take place. The veins of the placenta prove venous absorption.

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### III. PATHOLOGY.

*M. COLLIN on Diseases of the Chest, and the Use of the Stethoscope.*—This is a translation by Dr. Ryland, printed in a cheap form, of Collin's Treatise on the Stethoscope, as a means of investigating diseases of the chest. We recommend all our readers, who are unacquainted with the stethoscope, to procure this little work, from which they will learn the importance of the instrument; though we cannot promise that it will teach them to use it, without much perseverance and practice on their own parts. We shall probably take an early opportunity of going into the subject more in detail.

*Case of Tubercular Disease of the Brain, with Destructions of the Olfactory Nerves;* by M. BÉRARD, House Pupil at La Pitié\*.—August 15th, 1824, J. Beaufort was admitted into La Pitié, in consequence of complete amaurosis. The disease had appeared two years before, and had been preceded and accompanied by constant and supra-orbital headache. Its course was progressive, but rapid and regular; once only, the patient suddenly regained his sight, and distinctly perceived surrounding objects. This happy change lasted only a few moments, complete blindness returning as before. The patient was thirty years of age, above the ordinary height, and of muscular habit;

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\* Magendie Journ. de Physiologie, Jan. 1825.

his countenance was pale, and somewhat puffy, and his features presented the air of indifference so characteristic of perfect amaurosis. The permanent dilatation of the pupils displayed the perfect transparency of the humours of the eye. The patient's health was undisturbed; his intellects unaffected. Twice, during the five months that he was in the hospital, he suddenly lost his consciousness, and was agitated by convulsions like those of epilepsy. Lastly, he derived pleasure from taking snuff, appeared to distinguish its different qualities, and was disagreeably affected by the smell arising from the matter of a chronic abscess in a patient near him. It is right to state that these latter facts were not ascertained until after the death of the patient, and rest on the authority of his companions in the hospital.

In the commencement of January, 1825, the pains at the bottom of the orbits, and in the space between them, became so severe as to produce loss of sleep, and constant complaints. On the morning of the 15th he died almost suddenly, having spoken to one of his neighbours about two hours before. The body was examined 24 hours after death.

The vessels of the pericranium, the sinuses of the dura mater, and the vessels on the surface of the brain, were loaded with black blood. The anterior lobes of the brain adhered to the basis of the skull, and thus prevented the extraction of the brain in the ordinary manner. The two lobes confounded together at their inner, anterior, and lower part, were considerably indurated at this spot, and apparently fixed in the ethmoid fossæ. Their section presented a tubercular substance, brittle, rounded, mamillated, of the size of a large chesnut, extending into both lobes, and lodged in the upper part of the nasal fossæ, in consequence of the destruction of the cribriform plate of the ethmoid bone. There were not any traces of the olfactory nerves, or of their bulbs, which had no doubt been destroyed by the tubercular affection. The brain, round the seat of disease, was softened, reddish, and diffuent; farther off it was viscous, and not so soft; and at a still greater distance, it was in a healthy state.

The tractus optici appeared hollow internally: the optic commissure was softened. The nerves, examined between the commissure and the eye, were greyish, dense, and smaller than usual by a third: dissection proved that they were reduced merely to the neurilematic canals, all the medullary substance being absorbed.

*Remarks.*—This case is related by M. Berard, in proof of the truth of the doctrine lately advanced by M. Magendie, according to which, the first pair of nerves are excluded from the function of smelling, ordinarily ascribed to them. M. Berard speaks

with some degree of diffidence, but M. Desmoulins, one of the most active apostles of the new physiology of M. Magendie, in some remarks appended to the relation of the case, discards all doubt, and does not hesitate to assert, that in it the olfactory nerves and their lobes were destroyed; and that, consequently, those parts are not essential to the sense of smelling, which, in this patient, remained perfect.

To such an assertion, many objections present themselves. The fact that the patient retained the sense of smelling rests only on the recollections of his companions after his death. That he was sensible to the effects of snuff proves nothing, unless it be shown that the peculiar sensations excited by this substance are connected with the specific, and not with the common sensibility of the organ to which it is applied. No information is given as to the length of time previous to his death to which the statements of his fellow-patients refer, a point of some importance, if the matter of those statements is to be connected with the *post mortem* appearances, in the light of cause and effect. The report of the absence of all trace of the olfactory nerves is very unsatisfactory, more particularly as, from the adhesion described as existing between the anterior lobes of the brain and the basis of the skull, it cannot be considered as altogether improbable that they should have been mutilated or destroyed in the act of separating the adherent parts. Lastly, no observation whatever is made as to the condition of the divisions of the ethmoidal nerves, distributed to the upper part of the nasal fossæ.

In short, the case, though a singular and interesting one, seems not, by any means, adequate to prove the point which MM. Berard and Desmoulins wish to infer from it. We must confess that all that M. Magendie has said and done on this subject, appears to us to consist in a train of false reasoning, resting on perverted facts. His ingenuity and his industry we freely admit; and only regret that he should have been unfortunate enough so completely to misplace them.

*Cicatrisation of an Ulcer in the Stomach of the late PROFESSOR BECLARD.*—It is remarkable that Professor Beclard, whose premature death has excited such general regret, should even, after his death, contribute to the promotion of the sciences that he cultivated with unremitting ardour. The circumstances we are about to relate also furnish a striking instance of the influence of a rational treatment and strict regimen, over the inflammations of the alimentary canal.

About six years from this time (1825), after great exertions (mental), and prolonged watchings, during which he took large

quantities of coffee, in order to enable him to continue his studies during the hours usually devoted to sleep, he experienced the symptoms of gastritis, which speedily assumed a chronic form: he vomited up the greater part of his food, and suffered frequent internal pains.

From that period he restricted himself to a very moderate regimen, employing local blood-letting a few times, and frequent frictions on the epigastrium with tartar emetic ointment. It was long before he experienced any considerable relief, which, however, did not prevent him from persevering in his strict regimen, and in the habit of not eating or drinking any thing which could stimulate the stomach. He ultimately succeeded in calming the pains in his stomach, which returned only at very distant intervals.

It is unnecessary to say, that his death was the result of an affection of the brain. On examination, a cicatrized ulcer was found in the stomach, situated on its lesser arch, about four lines from the cardia. It was as large as a franc piece; its surface was depressed, and was traversed by a firm cellular band, on each side of which was a fossa, the fundus of which was formed by the peritoneal coat of the stomach. The edges of the ulcer were neither red nor swelled, and the rest of the stomach was healthy.

It may be presumed, that without the firm and constant resolution of the patient the ulcer would probably never have cicatrized; and that the least deviation in point of regimen might have caused a rupture of the stomach.—*Billard de la Membrane Muqueuse Gastro-Intestinale*, &c. &c. p. 558.

DR. W. AINSLIE'S *Pathology of Sporadic Cholera*.—The following are the remarks of this experienced writer, who practised thirty years in India, on this important disease, and whether our readers should agree with him or not, they are certainly worthy of attention.

“ Having often, while on the Coromandel coast, been disappointed in giving a decisive check to Cholera Morbus, by the usual means of powerful stimuli, antispasmodics, blisters, warm embrocations, &c., I concluded that I must be wrong in theory, so looked for other means of relief. On examining what is usually vomited on such occasions, I invariably found it of an acescent nature; and, on more minutely questioning those who were labouring under the disorder, I discovered that, in every instance, the ailment could be traced to some acid or acescent substance, such as lime-juice of a bad quality, unripe fruit of any kind, crude vegetables, buttermilk too long kept in hot weather, or, what often happened, the toddy of the cocoa-nut tree or pal-



myra tree, drank in a state of fermentation. So much having been ascertained, I lost no time in having recourse to antacids, and generally gave a preference to the sub-carbonate of magnesia, in a full dose, in a little tepid water; seldom less than two drachms and a half, or three drachms; this I found a more certain remedy than the liquor potassæ, or the sub-carbonate of potass; or than soda or lime-water, or even than the liquor ammoniæ, which is considered as a powerful antacid, in doses of from fifteen to twenty drops in a little water. So effectual was this remedy, that I found in very few instances indeed that I had occasion to repeat it. The offending acid was by this means neutralized; the distressing vomiting ceased; the patient had perhaps a few loose stools; a re-action took place in the frame; the natural warmth was in consequence restored to the extremities; the pulse became fuller and slower, and a tranquil sleep soon supervened, to crown the whole; from which the patient never failed to awake free from complaints.

“With this simple remedy—I mean the antacid—I hesitate not to say that I have saved many hundred lives. Since my return to England, I have ordered it with equal success; and, in one instance, to a lady in a most alarming situation, who, previously to taking it (the sub-carbonate of magnesia) had been brought to the brink of the grave, having used various antispasmodics, and many both internal and external stimuli, in vain.

“It may be argued against the plan of treatment now recommended, that magnesia has been already tried in cases of epidemic Cholera; and that, although it held out great promise at one time of proving an invaluable medicine, it had, like other remedies, ended by disappointing hopes. At its failure, however, given in the manner it appears to have been, combined with milk, I am not at all surprised, as, in this way, its vehicle contained the very principle of ascendency, which the absorbent powder itself was intended to remove; and I maintain, that no stomach in a deranged state can ever, with impunity, receive into it milk, in any form, whatever it may do when the digestive power is undisturbed. If then, even with milk, this medicine was found in some cases evidently to be of service, how much more so must it have been without it? In fact, magnesia with milk, on such occasions, I conceive to be the very bane and antidote combined; the one most admirably counteracting any good that could have been expected from the other.

“We all know that, for ages past, bile has been supposed to be the positive exciting cause of Cholera Morbus; and most of our modern writers, Foreign as well as British, still consider it to be so. Hence we hear much of the Cholera Biliosa; but this

I cannot say that I have ever seen in the form it is usually described. That bile, during hot Summers and in Autumn, is secreted in greater quantity than in colder months, no one will dispute; that it will frequently bring on simple diarrhœa, I do believe; or, if pent up for days together from constipation, and when the patient has been at the same time exposed to inordinate heat and fatigue, and subsequently to the chill air of the evening, that it will give birth to bilious fever, is what I can as readily conceive; but to produce any thing like Cholera, there must be, I presume, an acid of some kind or other in the stomach, either taken into it, or generated in it; the bile itself, if poured into that organ, which it can only be by regurgitation from violent retching, so far from producing the disease, often puts an entire stop to it, by correcting one of its worst symptoms.

M. BILLARD's *Case of partial Paralysis of the Face*\*.—The observations of Mr. Bell on the nerves of the face are now confirmed by every day's experience. In the following case, while there is a confirmation, there is also a curious and puzzling anomaly, which we leave Mr. Bell to explain.—“A woman, 60 years of age, had a tumour in the region of the right parotid gland, which broke and continued open for a long time, discharging peculiarly fœtid pus. The patient also became affected with symptoms of pulmonary consumption. In the course of the disease, and in addition to the affections of the lungs, she shewed a singular change in the features which attracted peculiar attention. The right side of the face became paralysed, but in a gradual manner, and with this exception, that both the eye-ball and upper eye-lid of that side enjoyed their full power of motion, while the inferior eye-lid was paralysed and hung downwards, the conjunctiva of which was red and tumid. The eye itself was in a constant state of lachrymation. The nose was drawn to the opposite side, the right nostril was contracted, the left dilated. The mouth was remarkably distorted, the right side of the lip being pendulous and relaxed, the left drawn upwards and towards the ear of that side. The muscles of the tongue were unaffected. When the patient spoke or laughed, the face was hideously and ridiculously distorted. The right side of the face was without expression, the features as it were dead, while the muscular action on the other side, being strongly developed, gave to this part of the face a most remarkable mobility and physiognomy. In sleep the upper eye-lid covered its proper proportion of the eye-ball, but the lower

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\* Medico Chirurg. Rev.

hung down. The sensibility of the paralyzed parts of the face was as perfect as the other side. At length the sore cicatrized, leaving a deep eschar, but the paralysis remained; she became hectic, and died phthisical. On dissection, scarcely any part of the parotid gland could be detected. The portio dura of the seventh pair was found to be destroyed at its exit from the foramen stylo-mastoideum."—"Je disséquai," says M. Billard, "la portion dure de la septième paire à travers le rocher; elle se montra saine jusqu'à la sortie par le trou stylo-mastoidien; la commençait son interruption, de sorte qu'il manquait au nerf facial une portion de son tronc d'une longueur égale à la largeur de l'échancrure parotidienne."

"This case," says the author, "appears completely to confirm the observations and experiments of Mr. Charles Bell on the facial nerve." The anomaly in the motion of the upper eyelid remains to be explained. Dr. Billard mentions several cases of partial paralysis of the face, in confirmation of Mr. Bell's doctrines, of which we shall only notice the following, related by M. Guessin, a distinguished physician of Angers. P. Chollet, aged 30 years, became affected in the month of December, 1821, with phlegmonous erysipelas of the face, eight days after her confinement. Delirium supervened, but at length the erysipelas subsided, leaving violent pulsating pains in the mastoid regions of the right side. There was some deafness, and a purulent discharge from the ear. It was at this time that the patient's mouth was found to be drawn to one side, the right eye remained open, the upper lip, and also the alæ nasi were drawn to the opposite side. There was no paralysis in any other part of the body. The sensibility was equally perfect in both sides of the face. The discharge from the ear ceased, but the paralysis and deformity remained in spite of every remedy employed. When tranquil, the face does not appear much distorted, but the moment that she attempts to speak or laugh, the deformity is great. The right eye is always in a state of lachrymation.

DR. JOHNSON'S *Case of a partial Paralysis*.—"We sometime ago attended a medical gentleman who met with this accident. In coming up from Edinburgh, on his way to Italy, he caught a cold in his right ear, and had some deep-seated pain there for some days. One morning, on getting out of bed, in his lodgings, in St. Martin's-lane, he was alarmed at seeing his mouth drawn entirely to the left side. He sent for the Editor of this Journal (*Medico-Chirurgical Rev.*), who easily recognized a compression of the portio dura, and assured Dr. M. that there was no affection of the brain. Mr. Shaw was invited to see the case, and immediately ascertained its nature. The

sensibility was perfect in both sides of the face. Dr. M. went to the Continent in this state, but ultimately recovered the power of his facial muscles, while in Italy. We may here remark that in Dr. M.'s case the motion of the upper eyelid was not lost, nor that of the lower. Dr. M. could just bring the eyelids together, but not closely. A slight line of the white of the eye could be seen when he was asleep. Some trifling degree of lachrymation was perceptible in that eye. In these affections then, of the portio dura in man, there does not seem to be so much danger of the eye, as results when experiments are made on animals. The eye of the affected side remaining open in them, the conjunctiva inflames, and opacity of the cornea is the consequence. This does not appear likely to happen in the human species, independently of the power which man would have of closing that eye mechanically, and thus guarding it against the accident alluded to above."

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#### IV. MORBID DISSECTIONS.

*SOARE'S Case of Lyssæ in a Rabid Dog.*—An ordinary-sized dog, two years old, was bitten by a strange dog, in the early part of April, 1824. On the 10th of that month, he became sullen, restless, less sensible than usual to caresses; but still he continued both to eat and drink. His master took no particular care of him. On the 13th of June, this dog bit several dogs, and a little girl, with such fury, that some alarm was excited; on which account he was brought, on the following day, to the veterinary school. The general appearance of the animal did not denote any disease; but he was soon seized with so violent a paroxysm, that he fell upon every thing in his way, and refused to eat or to drink, though he did not show any horror of liquids. The principal symptoms were redness of the inside of the throat, hoarse noise in barking, immobility of the jaw, fierce eyes, pupil very much dilated, and the conjunctiva inflamed; a strong light appeared to cause him uneasiness, and to bring on the paroxysms of fury. The next day the same symptoms persisted, though in a less violent degree, on account of his increased weakness. The dog died.

*Dissection.*—On opening the body, the mouth was found nearly free from saliva. On the left side of the frenum of the tongue, there was a small swelling of a longish shape, pointed anteriorly, and posteriorly extending to a level with the first molar tooth; the parietes of this swelling, dry and injected, were swollen in the middle, so as to give it the appearance of a barley-corn; the posterior extremity had, towards its termina-

tion, a small aperture analogous to the opening of a dilated follicle. This vesicle contained a little yellowish liquid, of a tolerable consistence: within it two ulcerated spots were observed, covered with a matter the colour of milk. There was nothing particular to be seen on the upper part of the tongue; but, towards its base, a redness extended into the fauces. The stomach was full of hair, fragments of rope, and other foreign substances; the mucous surface was inflamed; and, towards the curvatures, there were some ecchymosed spots and ulcers. There were no other diseased appearances, either in the thorax or abdomen. The substance of the brain was a little softened, and rather more vascular than ordinary; and this vascularity was still more remarkable in the spinal marrow, as well as in its envelopes.

*Mr. Scott's Account of Post Mortem Appearances in the Cholera of India*—"The external appearance of European subjects, who have sunk under cholera, closely resembles that which has been noticed as taking place during life. The surface is livid, the solids are shrunk, the skin of the hands and feet is corrugated. There seems no sufficient evidence of any uncommon tendency in the body to putrefaction after death, nor of any characteristic factor from the abdominal cavity. No particular morbid appearances have been found in any of the cavities of the body which are lined with serous membranes, or in these membranes themselves. The cavities of the pleura, of the pericardium, and of the peritoneum, have almost uniformly been found in a natural state; or the deviations from that state have manifestly had no connexion with cholera. The surfaces which are lined, or covered with mucous membranes, have, on the contrary, very generally exhibited signs of disease. These will be noticed, as the organs connected with them come to be mentioned.

"The lungs have not unfrequently been found in a natural state even in cases where much oppression of respiration had existed previously to death. Much more generally, however, they have been found either to be gorged with dark blood, so that they have lost their characteristic appearance, and have assumed that of the liver or spleen; or they have been found to be in the opposite state; that is, collapsed into an extremely small bulk, and lying in the hollow on each side of the spine, leaving the cavity of the thorax nearly empty. This appearance has been so remarkable as to induce Dr. Pollock, of H. M.'s 53d regiment, to conceive, that it could only be produced by the extrication of a gas within the cavity of the pleura, capable of overcoming the atmospheric pressure. It is understood, however, that opportunities were had of piercing the thorax of the dead body under water, and that no gas was extricated. As there appears to have been an absolute vacancy in the cavity of the pleura, that is to say, the lungs did not by any means fill it, it would seem that that viscus had exerted a contrac-

tile power, adequate to overcome the pressure of the atmosphere. The blood found in the lungs has been always very black. The heart and its larger vessels have been found to be distended with blood, but not so generally as the apparent feebleness of their propelling power, and the evident retreat of the blood to the centre, would have led us to expect. The right auricle and ventricle being gorged with blood, is nothing peculiar to cholera; but some dissections have shewn the left cavities to be filled even with dark or black blood, which we may reckon as a morbid appearance more peculiar to it. In the abdominal cavity, the peritoneal coverings of the viscera, being serous membranes, present in general but little deviation from the healthy state: occasionally, indeed, the morbid accumulation of blood in the vessels of the viscera, imparting an appearance of turgidity and blueness, is evident on their exterior surfaces. We also find them bearing marks of inflammation, especially where the patient may have lingered long before death. In other cases, the whole tube has had a blanched appearance, both externally and internally. The stomach and intestines generally preserve their ordinary volume. The appearance of the omentum is not sensibly affected in cholera. The stomach is found to be so variously affected as to destroy all grounds for pathological reasoning. It is very rarely found empty or much contracted after death, nor has any appearance of spastic stricture of the pylorus been often detected. It has, however, sometimes occurred. Its contents appear to be chiefly the ingesta in an unaltered state: in some cases, greenish, or yellow, or turbid matters are found. The stomach has been said to have been found 'lined with calomel.' Various appearances, either of active inflammation, or a congested state of the vessels, have been noticed, sometimes in one part, and sometimes in another. The parts seem as if they were sphacelated, thickened, softened, and friable; and, in short, exhibit so great a variety of appearances, from a perfectly natural state to the most morbid, that no particular light is thrown by them on the disease.

"The intestinal tube is sometimes collapsed, but oftener found to be more or less filled with air; distended in some parts into bags or pouches, containing whitish, turbid, dark, or green-coloured fluid: and, in others, presenting the appearance of spastic constriction. The latter, however, is not common. No fecal or other solid matters are found in the intestines; but, very commonly, large quantities of the congee-looking fluid, or of turbid serous matter. The duodenum, and occasionally, the jejunum, have been found loaded with an adherent, whitish, or greenish mucus; at other times they have been found seemingly denuded of their natural mucus: and often perfectly healthy. Traces of bile in the intestines, or of any substance apparently descended from the stomach, are exceedingly rare. Sanguineous congestion, and even active inflammation, are stated to be more common in the bowels than in the stomach; but, on the other hand, instances are very numerous where no such indications have been detected. The thoracic duct is stated to have been empty of chyle. The liver has been commonly found to be gorged with blood; but not always: it is an organ usually

very vascular : and it would probably demand a nicer discrimination than has been bestowed on the subject, to distinguish the degree of congestion in which it is naturally left by the settling of the blood after death in ordinary diseases, from that which has been observed after an attack of cholera. The gall bladder has almost universally been found to contain bile, and in the great majority of cases, even to be completely filled with it. As is usual with this secretion, in cases of retention, it is of a dark colour. Very different states of the gall ducts have been described : cases of constriction and impermeability, seeming to be equally numerous with those of an opposite character.

"The urinary bladder is found, we may say universally, without urine, and very much contracted. The lining or mucous membranes of the bladder and ureters have been found coated with a whitish mucous fluid. The smallness of the bladder after death has been generally adduced in proof of great spasm : but it is not unfrequently found to be equally small after death from other diseases : and it seems the nature of that organ, when it contains no urine, to contract, so as to leave no cavity. Dr. Baillie, in his morbid anatomy, thus notices this fact. 'The bladder is also found contracted to such a degree as hardly to have any cavity. This is generally not to be considered as a disease, but simply as having arisen from a very strong action of the muscular coat of the bladder previous to death.' The appearance of the spleen, which is so various under the ordinary conditions of the body after death, has indicated nothing that can be mentioned as belonging to cholera. The vessels of the mesentery have been very generally found to be uncommonly full of blood.

"In the head, appearances of congestion, and even of extravasation, have been frequently observed ; but not so uniformly nor to such extent as to require any particular notice. Only one case has been given where the state of the spinal marrow was examined : and, in that, indications of great inflammation were detected in its sheath : the case, however, was, in some degree, a mixed one.

"From this general view of the appearances found on the dissection of the bodies of persons who have died from cholera, it is manifest that the information thence derivable, is, in a pathological view, of a negative nature only. It is nevertheless of consequence, in a practical sense, especially in treating the sequelæ of cholera."

*M. VELPEAU's Case of Phlegmasia alba Dolens.*—The following case has been quoted among others, by some authors, to show that phlegmasia dolens depends on inflammation of the veins ; but any body who reads the case will at once see that it was not phlegmasia dolens : the author, indeed, who is "Chef de Clinique," and has been bustling himself into notice of late, is a rare specimen of French arrogance and ignorance.

Valette, 18 years of age, entered the Hospital Sainte Combe, on the 19th October, 1823, for the purpose of accouchement,

The process of parturition was tedious and painful, but not attended with any circumstance worthy of record. On the third day, when the milk fever was forming, she received some melancholy tidings, which made a strong impression, and the fever was increased. The mammae were much gorged. On the 5th day, the lochia ceased, and this cessation was succeeded by cough and pain in the chest. This state continued till the 11th day, when the febrile symptoms ceased, and some appetite returned. On the 12th day, it was ascertained that the patient had got some wine the evening before. In the evening a rigor, followed by fever and profuse perspiration. The abdomen was not painful. The appetite was gone—the cough still continued. Each day the above-mentioned phenomena were renewed, with the usual symptoms of an autumnal intermittent fever, until the 16th day, when the fever ceased. 17th day. The pulse is small—patient feels feeble—tongue dry. On the 20th, the cold chills and fever returned, with pains in the groins, hypochondria, and left side of the pelvis. The abdomen became suddenly distended—the patient was inclined to somnolency: 25 leeches to the abdomen. 21st day. The abdominal swelling is less, but the part is tender on pressure, especially in the hypogastric and inguinal region. No particular alteration till the 30th day, when the appearance of the patient indicated some great internal lesion, the nature of which could not be ascertained. By the 40th day, the cough had ceased. On the 41st day, the left lower extremity was found to be swelled, accompanied by violent pain in the hip and groin, extending ultimately to the whole limb. 43d day. The whole extremity oedematous. Pressure gave pain only in the groin. Irregular fever took place from time to time—an eschar formed over the sacrum—the strength diminished. On the 59th day, delirium supervened—and on the 60th, death closed the scene.

*Dissection.* There was nothing remarkable in the appearance of the brain, heart, lungs, or viscera of the abdomen. The uterus appeared sound externally, as also the ovaries and Fallopian tubes. When the left extremity was cut into, it was found much infiltrated in the cellular tissue. The lymphatic glands of the groin were much swelled and red—the muscles small and pale—the vena saphena sound—the crural vein, attentively examined, was found to be red externally, and its cellular coat thickened. This appearance obtained in all its branches deep-seated in the thigh, leg, and in the hypogastric vein. When laid open, these vessels were found filled with purulent matter, concrete, and adherent to their internal surfaces, particularly in the groin and internal iliac fossa. When



scraped off the internal surface of the vessels; the latter appeared sound, being pale and not thickened. The primitive iliac vein was also filled with purulent matter of a grumous and membraniform appearance. This vessel was strongly adherent to the sacro-iliac symphysis by means of apparently inflamed cellular tissue. Pus was found in the inferior cava, from its commencement to its termination in the auricle, which cavity also was full of the same. The ventricle, the pulmonary artery even, presented the same contents, mixed with blood evidently altered in its composition. The tunics of the vessels presented no deviation from health. The same might be said of the arterial system. A few small abscesses were found between the muscles of the leg. The inter-pubian cartilage was softened—and matter similar to that in the veins was found there. The same appearances were observable in the left sacro-iliac symphysis. The coxo-femoral articulation presented some purulent matter of very fœtid quality. There was no disease in the other lower extremity, or its corresponding vessels.

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#### V. SURGERY.

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**MR. LISTON on Lithotomy.**—The author attributes the numerous deaths which occur after the operation of lithotomy to exhaustion from a protracted operation, and to infiltration of urine afterwards. We shall extract Mr. Liston's remarks on the latter.

“In order to do away with this danger, and also to facilitate the extraction of the stone, the external incision should be made extensive. It should be made to pass well by the side of the anus. All stricture occasioned by the levator ani is to be relieved, the rectum being pressed to the one side by the finger of the left hand. The staff is then, and not till then, to be felt for in the upper part of the incision, under the symphysis pubis (where it is covered merely by the membranous part of the urethra), and the incision into the neck of the bladder made from thence. In making the incisions thus, the operator does not interfere with the management of the staff; the surgeon assisting keeps that instrument well lodged in the bladder, and hooked firmly against the symphysis pubis, so as to afford as much room as possible betwixt the urethra and rectum. It is not moved from this position from the time of its introduction, until the opening into the bladder is completed.

“The preliminary incisions are made, of course, with a sharp-pointed knife, and it is of little consequence whether those into the bladder are performed with a beaked one or not. The greater number of those surgeons who have studied this and other operations on the dead body

are agreed, that the internal as well as external incisions can be very well executed with the common operating knife. An opening sufficient to admit the finger easily, is made by simply pushing the knife along the groove of the staff, and raising it a little upon the point, and through this, a stone of a considerable size can readily be made to pass; if, however, the stone is found to be of a large size, a narrow probe-pointed knife will be found the most convenient instrument for enlarging the wound sufficiently."

**M. CIVIALE'S Method of destroying Urinary Calculi.**—The peculiar method of M. Civiale, which we mentioned in a former Number, has attracted considerable notice, both in France and America; but we have not heard of its having yet been tried in this country. We shall here give the substance of the report of MM. Percy and Chaussier, to the Institute, on the subject.

"In the month of July, 1818, M. Civiale presented to the Minister of the Interior a request for pecuniary advances, to enable him to get instruments of his invention made, which he said were adequate to the destruction of the stone in the bladder, without having recourse to the operation of lithotomy. This request was referred, some days after, to the Society of the Medical Faculty, with a memoir, explanatory of many designs relative to a theory of the pocket of which he spoke; and, secondly, of the instrumental apparatus, which he already named lithontriptor. On the 14th of the same month, the Society gave to M. Civiale the same two commissioners whom the Academy have lately given to him; but on that occasion they made no report, and here the matter rested.

"Nevertheless, this lithontriptic apparatus, with its present modifications and perfections, was executed the year following by a mechanician of Paris; so that the origin of this method, which now occupies us, may be traced four or five years back, although it has not acquired its full standing for much more than three years.

"The first step, and perhaps the most difficult to perform, was the introduction of a straight sound into the urethra and bladder. Desault and M. Deschamps, it is true, had sounded with a semi-curved catheter; and it is also true, that Lassone, in offering an anatomical description of the urethra, has given us to understand, that this tortuous but flexible canal—extensible at every point except at the exterior orifice—could assume all directions, and even become straight, by means of a straight sound. Nor is it less true that in the office of a surgeon of Portici, long brass sounds, quite straight, and which could only have been employed as catheters, were found. We must likewise observe, that the Bavarian physicians had also thought it possible, and

even easy, to introduce into the urethra and bladder, the silver tube of fourteen inches in length and four lines in diameter, by which he proposed to commence his operation; but no one had as yet made use of this instrument among us; unless Dr. Amusat, who openly aspires to priority on this point, and whose fine work on the urethra is well known, had employed one similar in 1818. But it is no more our purpose to examine this subject, than to decide between M. Civiale, to whom the whole discovery is attributed, and his colleague, M. Jacques Le Roy, who claims it in part. We prefer thinking that these estimable physicians, cotemporaries, and fellow-students, without confiding in each other, entertained the same thought, in the same way that M. Civiale could make the same discovery as the physician of Salzburgh, without having heard of him or of that gazette; and that, having started from the same point, and followed the same route, M. Civiale could have arrived first.

"Consequently, it was with the straight sound that it was necessary to commence; and our physician soon acquired the habit of using it with as much facility and dexterity as the common curved catheter.

"There was no other way than that for introducing the other instruments to the stone, or allowing them the necessary movements. But what are the other instruments? One is requisite to seize the stone completely, and allow it to escape only at the will of the operator. We cannot say, in respect to this instrument, that it is truly of M. Civiale's invention; since we find models of it among the ball extractors, described and engraved in Bartholomy Maggi, and André de la Croix; since it is met with in Franco's work, who has called it his vesical quadruple; and since, M. Deschamps has had it engraved in one of the plates of his work. But if he has not altogether invented it, which he would not have found much difficulty in accomplishing, it can with propriety be asserted, that he has succeeded in giving it its most appropriate application. It is likewise a sound; but one of steel—which can enter the former—straight and hollow, like it, and terminating by three branches, very elastic, curved, and remaining closed and hidden so long as they continue in the principal sound, which performs the office of their sheath. When pushed out they open by virtue of their elasticity, and form a kind of cage or steel purse, in which the stone is sooner or later made to enter, and which is immediately shut upon it, in pulling the sound backward, as far as the volume of the extraneous body, or the direction in which it has entered, will allow.

"In the second sound, or rather in the cylinder forming the forceps, there is contained a long steel stilet, which enters and

turns in it with ease, and terminates at the end towards the bladder, and between the branches of the forceps, by a file, made in form of a strawberry, or by a small circular saw—a pyramidal trephine, according to circumstances, size, and supposed nature of the stone. This latter being firmly fixed, the moveable stilet is pushed towards it, and by means of a pulley with which it is provided at its exterior extremity, of a whirl on which it is mounted, and of a long bow with a catgut string, it is made to turn, in a manner similar to that resorted to when we wish to bore a hole through a plate of metal. No sooner is the machine in operation, than the hollow or sonorous sound of the breaking or grinding performed on the stone, according to its softness or hardness, is heard; and the patient suffers little or no pain.

“As the work progresses, the stilet is made to advance in the same proportion towards the stone; and this is done by suspending for a moment the action of the bow, which is soon resumed, in order to pulverise more and more the stony concretion, and, if the operator or patient is not too much fatigued, to hasten its destruction; but as it is intended to accomplish this in two or three operations, it is postponed to periods more or less distant. A spontaneous discharge of urine, or an injection of warm water into the bladder, usually terminates the operation, and causes to pass by the urethra, now dilated by the large sound, fragments of the stone, more or less numerous or considerable, or a muddy sediment, which soon precipitates, and is easily collected.

“At first, M. Civiale, instead of the bow, employed a handle, which he is a good deal disposed to resume; first, because he finds it more simple and quite as convenient; and in the second place, because it is his own idea, whilst the other is the suggestion of a stranger.

“We omit, through design, a number of descriptive details, and minute precautions, which, though they concur to the *ensemble* of the operation, could not be easily understood in a simple lecture. But it is important to say, and it is necessary to be known, that we have assisted at the various and indeed almost public trials, which M. Civiale has made of his method, as well upon the dead as upon the living body; and that we have been completely satisfied of the truth of every thing he had previously announced to us.

“Thus, real stones having been introduced by an incision into the bladder of many dead bodies, and made fast almost without difficulty in his pincers, were broken into pieces and pulverized almost instantly by the lithonriptor.

“We remarked, in the course of these trials, that during the

pulverization of the stone, the bladder is beyond the reach of any bruise from the instrument; and that we convinced ourselves there was little foundation for the fears we had entertained with regard to this point, in the operation on the living subject."

The report concludes with several interesting cases, which were operated upon in presence of the commissioners; but they are too long for insertion here.

Dr. ROGERS on *tying large Arteries to prevent inflammation*.—"This operation was first performed by a surgeon, who reported the case some years ago in the American Medical and Philosophical Register, Vol. iv. p. 176. The case which occurred in the practice of Dr. Rogers, was one of a simple wound in the knee, penetrating the joint. It attracted little attention, the man using freely spirituous liquors in the first days of the disease. It became more inflamed, and amputation appeared to be necessary. The femoral artery was taken up, and the man got well by the 25th day. This plan is recommended to lessen inflammation in compound fractures, and dislocations of the ankle, where an effort to save the limb is advisable. Should, however, there be any danger of tetanus, which does not appear to be governed by the increase or diminution of arterial excitement, amputation would be advisable in many instances, in preference to taking up the artery in order to abate inflammation. When these injuries occur in young subjects, with unimpaired constitutions, and enjoying the benefits of country air, the attempt to save the limb should undoubtedly be made, and then the measure of tying up the artery would be advisable. He further states, that, as it had been observed that compound fractures of the ankle-joint do well in the country, when in the city they generally prove fatal, an attempt to save the limb, in the latter situation, will not be advisable in most cases; in this opinion he is supported by the late Dr. Kisser, of New York, who occupied a distinguished rank among the professional men of this country. He then gives a case of compound dislocation of the ankle, in which the operation of tying up the femoral artery was practised by Dr. Mott; trismus supervened on the 7th day from the accident, (the wound of the ankle till then doing well,) and the patient died. The danger of mortification from defect of circulation would at first sight appear to be an objection to this operation; Dr. Rogers then subjoins two interesting cases, which shew that danger from this source is less than might be imagined.

Case.—"A lad, aged 16 years, was brought to the Hospital July 4th, 1821, with an extensive laceration of the arm, which he received from the discharge of a gun, while imprudently resting his arm upon the muzzle. The discharge entered the arm about the elbow joint, tearing off the integuments for six inches in length and three in breadth. The nerves, veins, and arteries, lay like cords on the surface of the wound. The muscles lacerated in such a manner as to destroy the appearance of their original structure. The bone laid bare, and in some

places denuded of its periosteum; he lay for some hours weak and exhausted; his pulse was small and quick. The extent of the wound led the attending surgeon to believe that the brachial artery, or some of its large branches, were divided, and hæmorrhage was expected from the wound, as the system recovered from the immediate shock of the accident. To lessen inflammation and prevent hæmorrhage, the brachial artery was secured by ligatures as it passes out from the axilla; little hope was entertained of saving the arm, but to the astonishment of all who saw the case, there was merely sufficient inflammation in the wound to produce healthy suppuration and granulations. He suffered but little pain during his recovery; and I may venture to assert, that there was not more inconvenience experienced from this lacerated wound, than there would have been from a simple incised wound of the same extent, where the circulation had not been interrupted. He recovered rapidly, and in the course of a few weeks left the Hospital in good health.

*Case.*—"John Mylander, aged 30 years, came into the Hospital, Nov. 29, 1823, for an inflammation of his arm. He stated, that four days previous he felt a slight indisposition, and applied to a doctor for advice, who bled him. That the blood flowed very fast, and there was considerable difficulty in stopping it. On his return home, it began to swell, and was very painful. The incision made by the lancet had healed. The arm was swelled to such a degree that it appeared on the point of bursting; and so very sensible, that he complained bitterly of the pressure from the necessary dressings. He was bled largely, ordered an anodyne, and emollient applications to the arm. On visiting him the next morning, and examining the arm more particularly, I found a distinct fluctuation of matter at the upper part, and on the outside of the tendon of the biceps muscle. I accordingly passed a lancet into the abscess, and discharged at least six ounces of matter. A poultice was ordered, and I left him to visit the other wards. After having passed two wards, the nurse came after me in great haste, stating that the man was dying from the loss of blood. I hastened to the ward, and found him lying on the floor, faint, and covered with blood, which was flying from the arm half-way across the room. I instantly plunged my finger into the wound, and after pushing it to its full length through the sac which had lately contained matter, I was able to find the artery, and, by pressing with great force, to command the circulation. The attending surgeon immediately saw him, who made an incision down to the artery, and found a wound passing completely through it, about the eighth of an inch in length. After clearing away the clotted blood, which was extensively diffused through the cellular substance, it was secured by ligature. The hæmorrhage returned again in two days, when it was found necessary to secure the artery higher up. After this second operation, which completely cut off the blood from the arm through the principal trunk, the man expressed great satisfaction at the almost immediate relief which it gave him. In this case, we might have expected mortification to have fol-

lowed the interruption offered to the circulation through the principal trunk, as the cellular substance was crowded with coagulated blood for some distance above the elbow to the ends of the fingers; and so great was the tumefaction, that it must have interrupted in a great measure its circulation through the collateral branches. But notwithstanding all the difficulties attending this case, the tumefaction and pain of the arm rapidly diminished; the wound healed kindly, and in four weeks he was discharged cured."

**Dr. NORTH's method of reducing dislocated wrist.**—The author proposes the following plan of reducing the dislocation of the radius forwards. In the cases seen by Dr. North, it occurred principally among children, and was produced by a sudden jerk given to the arm by another person. As this disease is stated by Sir Astley Cooper to be of difficult reduction, the following directions to accomplish this object are interesting and valuable—the result of thirty years' experience:—

"The upper arm is to be held firm by an assistant. The surgeon takes hold of the fore-arm of the patient near the wrist, with one hand, and with the other he grasps the same arm just below the elbow, moving his fingers upon the head of the radius. He then applies sufficient extension and supination to the fore-arm, and the moment this is done, he with a sudden and quick movement, preventing the arm from pronating, carries the wrist and the hand of the patient to the patient's shoulder, at the same time pressing his fingers upon the head of the radius. In this way, I have never failed, during a practice of more than thirty years, of reducing this bone; and that too at the first attempt. I have had children brought to me several miles, who could not use their arms at all; but, upon the bone being replaced, would, in a few minutes, make use of them. I have generally thought it prudent, however, to put their arms in a sling, and sometimes to apply a bandage."

**ROGERS' case of Osteo-Sarcoma.**—The patient, aged 34, had been debilitated by intemperance and hard labour. The affection of his nose was of six weeks standing. The disease first made its appearance by an enlargement of the soft parts in front of the mouth, and a loss of all the incisives teeth. His nose soon became obstructed, and a body of a fungous character made its appearance in the right nostril, pressing upon the septum, and gradually obstructing the passage of air through the nose. The disease had progressed thus far at the time of my seeing him, without much pain, but with surprising rapidity, and was then making its way through the palate.

"The operation was accordingly performed on the tenth, in the following manner. An incision was made first through the filtrum of the upper lip, which was dissected from the tumour and alæ of the nose, so as to turn both portions of the lip over the cheek. The second incision was to detach the cartilaginous portion of the septum narium from the top of the tumour. After extracting the first molar tooth on each side, a fine saw was used, which readily divided the superior maxillary bone,

including the palatine process, the two incisions meeting at the palatine suture: after sawing through the principal bones, the tumour was easily removed, although it extended much farther back than was at first anticipated. It was found necessary, during the operation, to remove the two inferior turbinated bones, a part of the septum narium, the vomer, and a part of the right antrum.

"Only a small quantity of blood was lost during the operation, considering the extent of the disease, and the vascularity of the part; this may be attributed to the frequent use of the saw. After the operation, the soft parts were brought together, and secured by three sutures and adhesive straps. No unpleasant symptoms occurred during his recovery. The parts adhered by the first intention. There was considerable falling in of the upper lip, in consequence of the support which it gave to the nose. In two weeks from the time of the operation, the patient was able to walk out, and on the fourth, to return to his daily labour. The situation of this man will be rendered comparatively very comfortable with the assistance of a cork palate."

#### PRACTICE OF PHYSIC.

*Italian Experiments with Cinchona Bicolorata* \*.—These papers contain an account of the nature and effects of a kind of cinchona, which appears to have given rise to a remarkable difference of opinion between Professor Brera on the one hand, and Professors Carminati and Palletta on the other.

In August 1824, M. Zannetti, a druggist at Treviso, obtained a kind of bark different from the usual ones in commerce, and of which it was doubtful whether it belonged to the genus cinchona or cascarilla. Several medical men of Treviso and its vicinity, found on trial, that it was capable of curing intermittent fevers, with more certainty than the kinds of bark in common use, and in smaller doses, viz. in the quantity of half an ounce, divided into six portions.

Professor Brera was therefore induced to employ it in the Clinical Institution at Padua, and with equally favourable results in six cases of intermittent fever, of which one assumed a malignant cardialgic form. He found also that it did not produce the same disturbance of the stomach and intestines, as the bark

\* 1. Risultamenti ottenuti nella Clinica medica dell' J. R. Università di Padova, dall' amministrazione di una China Bicolorata per la cura delle febbri accessionali anco d'indole perniciose. Del Cav. V. L. BRERA, Professore, &c. Padova, 1824.

2. Rapporto dei chiarissimi Signori Professori CARMINATI e PALLETTA, all' J. R. Istituto in Milano. Sulla Corteccia Americana detta China bicolorata o pitaya.

3. Nuove Cenni sul Rapporto presentato al J. R. Istituto dai Professori CARMINATI e PALLETTA; &c. &c. (BRERA in Annali di Medicina, No. 102, Giugno. 1824.).



in common use. He describes it as being in pieces not exceeding half a metre long, about one third of an inch in diameter, and one thirtieth in thickness. Externally it was smooth, and covered with a yellowish-grey and brown epidermis, interspersed with pale or white spots. It wanted the rough surface and transverse fissures found in other kinds of bark. The internal surface was smooth, and of a more or less intense violet colour. The longitudinal fracture was regular, of a deep yellow colour, with resinous spots, and reddish-brown on the inner side. The transverse fracture, smooth and not fibrous. It is without smell. The taste is slowly developed; it is bitter; slightly aromatic and like cinchona, and in a slight degree styp-tic. The bark is hard and weighty, and of a tawny yellow colour when powdered.

Uncertain to what genus it belonged, Professor Brera gave it the name of *cinchona bicolorata*, in allusion to the distinct colours presented by the external and internal surfaces of the bark. An analysis by Dr. P. de' Col gave reason to suppose that it contained cinchonine in a state of combination, and also some quinine. Professor Brera concluded by confirming the assertions of the medical men of Treviso as to the superior efficacy and certainty of this *cinchona bicolorata* over those in common use, even when employed in doses smaller in the proportion of one to four.

This pamphlet formed the subject of a Report to the Institution of Sciences, &c. at Milan, by Professors Carminati and Palletta. In this, after admitting the general correctness of the description by Prof. Brera, they add that this bark is of much greater specific gravity (1.187) than any known kind of cinchona bark; that its taste is very bitter, disagreeable and nauseous. A careful analysis, made at their request by M. Ferrari, indicated the presence of (1) chlorophyle; (2) a fatty substance; (3) a vegetable acid in very small quantity; (4) a bitter principle similar to that contained in *Angustura* and *Simarouba*, and in *Calumba* root; (5) a resinous substance; and (6) a gummy one, like that contained in the root of gentian; but neither quinine nor cinchonine.

They further state, that in four cases in which it was employed in the hospital at Milan, by the Doctors Martinelli, Gola, Bianchi, and Sacco, the results were in complete contradiction with the statements of Professor Brera. In all four cases the new bark failed, though assisted by all proper measures, and the patients were indebted for their recovery to the sulphates of quinine and cinchonine.

They add that they were further informed by MM. Carones, of Milan, that the bark in question was brought to Europe from

America ; that it was rejected at Liverpool, whence it was sent to Trieste ; and that when offered to them at the price of a franc per lb, they refused it, judging it to be the bark of some species of *Angustura*, and not a *cinchona*, an opinion in which they were joined by MM. Pechler and Miller, of Vienna, druggists, one of whom had examined it at Trieste. Professors Carminati and Palletta add, that the accounts they received from various other sources coincide with their own opinions as to the inefficacy of the new bark, and its deficiency in quinine and cinchonine. Among those who spoke as to the latter point, were MM. Taddei and Galvani. A celebrated druggist of Paris, who was applied to, produced some bark precisely similar, which had been examined by the French chemists, and was known to them under the name of *cinchona pitaya*, as being extremely bitter, disgusting, and productive of vomiting.

In conclusion, they do not hesitate in asserting their belief that the bark in question, whether it be called *bicolorata* or *pitaya*, is not a *cinchona*, but is derived from the *cusparia Angustura* (*Bonplandia trifoliata*), or some of its varieties, and that its qualities by no means correspond to the favourable accounts given by Professor Brera.

In his remarks on this Report, Professor Brera has brought forward some additional circumstances, which in a great measure invalidate some of the most important conclusions contained in it. He reports the opinions of some eminent individuals to whom he had sent specimens of the bark in question. According to the Baron de Jacquin, it is neither a *Cinchona*, nor an *Angustura*, but rather a *Croton* ; and probably the *Croton febrifugum* of Ruiz.

M. Valentin, of Paris, also states that it is not, as he and others at first supposed, an *Angustura*, and that according to Baron de Humboldt, it is the *Quassia simarouba* ; whilst, on the contrary, M. A. St. Hilaire, who brought a similar bark from Brazil, calls it *Solanum pseudo-china*.

A letter from Baron de Humboldt himself, informs Professor Brera that he considers it as more nearly approaching to the Genus *Bonplandia* than *Cinchona*, and that he had applied to M. Pelletier, to analyse it, with the view of ascertaining whether it contained any Quinine or Cinchonine, which might afford the means of a probable, though not a certain judgment as to its real nature.

Such striking differences of opinion only serve to show that notwithstanding all that has been written on the subject, we are still very far from having a full or correct knowledge of the relation of the various medicinal barks obtained from America, with the botanical characters of the plants producing them.

The remainder of Professor Brera's paper is more decisive of the point at issue between him and the Reporters on his former essay. He gives a view, in the form of tables, of all the cases treated by the *Cinchona bicolorata*, that had come to his knowledge. Out of fifty-six cases of quotidian fever, fifty-two were cured; 204 out of 214 tertians; fifteen out of twenty-five quartans; and the whole of 125 anomalous cases in which it was employed. Of these, too, a very few only were under his own care, the remainder being treated by various respectable physicians in different parts of the country.

It is unnecessary to follow Professor Brera through the remaining parts of his paper, which being chiefly controversial, are devoid of general interest. He promises to make his book the subject of a more extended treatise, which will also include a history of the various kinds of bark which are more or less commonly used. By that period he calculates on obtaining such a knowledge of the chemical and botanical properties of the *Cinchona bicolorata* as shall enable him to establish its real character.

**Dr. CLUTTERBUCK on Fever.**—In this new Edition of his well-known work on Fever, the author has greatly extended his former researches both in following out his previous explanations, and in answering the objections which have been brought in opposition to his views. We were preparing a review of this work for the present Number, but we could not complete it, in time for insertion. In the meantime, we shall glance at Dr. Clutterbuck's preface. On one point, the author must be allowed to have effected a very great revolution, not in Medical Theory merely, but in actual practice.

"It is highly gratifying to me," he says, "to observe, that although the theory for which I have contended has been called in question, most of those who have impugned the general principle admit, nevertheless, the propriety of the antiphlogistic treatment, including blood-letting, especially at the outset of the disease, which is the point I principally contend for. Indeed, a great revolution has taken place, in this respect, within the last few years, in the practice of this metropolis, and I believe, of the country in general; and it cannot be denied that such is the natural result of the doctrine I have presumed to maintain; indeed I know not how to explain the salutary effects of blood-letting in the cure of fever, now so generally admitted, without referring to the supposed inflammatory nature of the disease. In a word, the treatment of fever that is most decidedly and unequivocally useful, is that of inflammation in general, due allowance being made for the peculiar nature and circumstances of the organ affected."

On another important point we quote the following intelligent remarks, with which we entirely agree.

"It is a great mistake to suppose that the morbid appearances observed in the brain after death, are in general, the cause of the symptoms that take place during life. They are commonly to be considered as affording evidence only of the existence of disease in the part. This is clear, when we refer to the cases of epilepsy, mania, or other periodical affections of this organ; where alterations of cerebral structure are frequently found, which having once taken place, must, of necessity, be permanent, although the symptoms are of occasional occurrence only. And the same conclusions may be drawn, from the great similarity observed in the morbid appearances, after different diseases of the brain; so that, in fact, it would puzzle, I believe, the best anatomist to indicate, from *post mortem* appearances merely, the disease under which the patient had laboured; or, on the other hand, to predict, with any tolerable certainty and precision, what the appearances would be after death, from any given set of symptoms manifested during life. The essence of disease, in short, consists in something far more subtle and fleeting, than the gross changes that are to be detected by the knife of the anatomist."

This is in complete accordance with the quotation, which we gave in last Number, from Dr. Good's preface to his *Study of Medicine*, and which, is also quoted in addition to his own remarks, by Dr. Clutterbuck.—We reserve our farther observations on the volume till our next Number.

**HOLBROOK on the Treatment of Bronchocele.**—The following may be considered as a good summary, of what is at present known on the treatment of this interesting disease.

"*Pressure.*—The advantages of this remedy, I think, may be extended when judiciously applied to every case of bronchocele, as it appears to operate by retarding the flow of blood through the tumour, by promoting absorption, and also by supporting and preventing the dilatation of the vessels. Were it not for the inconvenience and uncomfortable feeling produced by it, from its impeding the free return of blood from the head, and interrupting respiration by its pressure on the veins and on the trachea, I should say it deserves the preference over most of the others; but, from these unpleasant effects, there are few who have resolution enough to persevere sufficiently in its use to derive full benefit from it. I have therefore of late, reluctantly, been obliged to have recourse to it less frequently; notwithstanding my confidence in its beneficial influence over the tumour is still unabated. For the information of those who have not already used it, and feel disposed to try its effects, I should say, that such cases should be selected for the experiment in which the enlargement is so situated as to allow of its being applied without pressing too much on the trachea and jugular veins; and some assistance in that respect may perhaps be derived from a careful application of small compresses, over which the pressure may be made, either by means of a bandage round the neck, or stripes of adhesive plaster. With the use of pres-

sure, the other remedies should at the same time be attended to ; which constitutes a great recommendation to it, as it interferes with none, either external or internal.

*"Bloodletting"*—This is a remedy which under certain circumstances may become useful, both generally and locally ; and the latter is in most cases a useful assistant, and should therefore seldom be neglected.

With respect to general blood-letting, more caution is necessary, as so many cases of bronchocele are accompanied with great constitutional weakness and strong marks of scrofula : but where no tendency of this kind exists, and the pulse is strong and full, with an appearance of congestion about the tumour and surrounding parts, marked by fulness of the face, an alteration in the voice, and some impediment in the respiration, one or two bleedings might perhaps be had recourse to with advantage. But a short, uneasy, wheezing respiration should not be attributed to over fulness of blood or inflammation, as it more frequently accompanies those cases in which there exist the greatest marks of nervous irritability and weakness, and seems to be produced by the accelerated and weak action of the heart and arteries, in which the circulation through the lungs of course partakes.

*"Digitalis."*—This is a remedy which does not appear to possess any further beneficial effect over the disease than by its influence on the circulation, with which view I think I have given it with advantage ; but its power of lessening the frequency of the circulation does not appear to be so certain in the state of action accompanying this disease, as under circumstances of inflammatory action ; but still I think it has that effect in a sufficient degree to render it a useful remedy, when combined with those medicines which appear to possess a specific influence over the disease.

*"Burnt Sponge"*—This remedy, which has been handed down to us by the older surgeons as a specific in the disease, is still, in my opinion, of all others, as a general remedy, the most effectual we are acquainted with ; and, when judiciously and perseveringly employed, will seldom fail in producing a decided beneficial effect on the disease. Whether there is any advantage in the mode of employing it in the form of lozenges, to be gradually melted in the mouth, and swallowed in that way, I am unprepared to say ; but I should think otherwise, and therefore never use it in that form : neither do I think its efficacy is much improved by any of the combinations with which it has been administered, except in as far as they render it less disagreeable, and less debilitating to the stomach ; on which principle, the following is the form I have been in the habit of prescribing it :—

℞ Spong. (subtilissimè levigati) ʒss  
Pulv. Rhei ʒss.

— Zingib. gr. xij. M. et in part. æquales xij. distribuenda ;  
quarum summat. j. ter in die ex melle.

As I have thought the continuance of this medicine produces an alteration in the state of the secretions into the stomach and bowels, which accumulate, and become a source of irritation, I generally give an ape-

rient, of which calomel forms a part, about once or twice a week according to circumstances.

It is a medicine which appears to act by a specific influence over the disease, and is applicable to all stages; and therefore does not seem to require those regulations in the administering of it that are necessary when other means are adopted; the only object appearing to be, to introduce as great a quantity into the system as the stomach will well bear, so as in a manner to saturate the system with it, and to persevere it until some effect is produced on the swelling; but if this does not take place in the space of about a month, I generally suspend the use of it for a short time, and resume it again, as few stomachs will bear this medicine, in full doses, for a longer period. By a determined perseverance in this way, a cure, or a considerable diminution in the tumour, will seldom fail to be obtained, though sometimes it will require as much as twelve months to effect it.

"During the administration of this medicine, the local treatment of the tumour should not be neglected (when any indication occurs,) such as the application of leeches, &c.

"I have sometimes added small doses of iodine to the burnt sponge, and have thought that, in some instances, benefit has been produced from that combination; but on this point I shall speak further in the following statement of my experience of the effects of that medicine.

"*Iodine.*—In what I have to say on the subject of this medicine, which has lately been so strongly recommended by Dr. Coindet, and other practitioners on the Continent, as well as by some in our own country, I shall confine my observations principally to the effect which I have found produced by it in my own practice; and, although I think its powers have been much overrated, still I am of opinion it possesses sufficient influence over this disease in some cases to render it a remedy of great utility; and if I am right in the inference which my experience has led me to make of its powers, which is, that its beneficial effects are most evident in such cases as appear to be the least acted on by the burnt sponge, it will, from that circumstance, be rendered doubly valuable.

"In the foregoing part of my observations, I have mentioned that I considered the division of this disease into soft and hard as the most useful for practical purposes, not only as it affords a striking distinction in the external character of the disease, but also that frequently some alteration in the treatment was required in those different states.

"From repeated trials of these two medicines, I have found that the burnt sponge has, at all times, the most powerful effect over the soft and recent enlargement of the gland; but frequently, in the old, hard, and lobulated cases, the disease has appeared to be more effectually acted on by the iodine; but this has not been the case in every instance, as very often, particularly in those cases which are accompanied with irritable excitement in the vascular system, or such as have been termed the aneurismal bronchocele, the beneficial effect of iodine has appeared to me very doubtful.

"The cases, therefore, which in my practice have been most benefited by it, are such as are attended with the strongest marks of torpor in the system and in the tumour, and where the circulation is the least altered from its natural state. In cases where the tumour is hard, irregular, and knotted, and at the same time accompanied with an accelerated and throbbing state of the vessels, I prefer the external application of this medicine to the tumour, in the form of the ung. hydriodat. potassæ of Magendie; while I give the burnt sponge internally, combined with other remedies, as the state of the system seems to indicate, and the occasional application of leeches to the tumour.

"In some cases the efficacy of both medicines has appeared to be increased by being combined, particularly in females about the period of puberty; in which cases, the stimulating power of the iodine has tended to excite the secretion of the catamenia; from which effect, I have thought the iodine answers better about that period than in other cases accompanied with much irritation in the vascular system.

"In some cases I have been under the necessity of suspending the use of this medicine, in consequence of its producing considerable irritation and distress in the system, accompanied with giddiness; but this effect has not often occurred.

*Setons.*—"This is a remedy which, although recommended by several very eminent practitioners, I have not as yet tried, as I have found few patients willing to submit to it; and also because I think, in general, except in very large and indurated cases, milder remedies succeed with as much certainty as the cases related to have been treated by seton warrant us in expecting from that remedy; I have therefore preferred the milder treatment; yet in cases where the tumour is hard and prominent, and has resisted the effect of other remedies, I think it deserves a trial.

"In one case which came under my care, when the disease was but small, and confined to the middle lobe, an abscess accidentally formed in the cellular substance over the tumour, which had the effect of completely removing it. From analogy with this case, a beneficial effect might be expected even from the insertion of a seton through the cellular membrane, without penetrating the gland: this case is inserted in the Table.

*Ligature of the Thyroid Arteries.*—"Viewing this disease as originating from an increased supply of blood to the gland, the tying of the arteries which supply it would naturally lead one to expect to be the most effectual remedy that can be adopted for its cure; and if it could be always had recourse to with safety, it would be advisable to try it in all cases which are found to resist milder means. But as such an operation cannot, under the most favourable circumstances, be performed without considerable danger, I am of opinion that it ought never to be had recourse to, except in cases where, from the large size of the tumour, danger is apprehended from its interruption to respiration, and the return of blood from the head. In such cases, I think the operation justifiable; but from the general accelerated state of the circula-

tion which mostly accompanies this disease, and the circumstance of the greater quantity of blood which is consequently carried to the brain in a given space of time, I think the operation would be attended with greater danger than the tying of other large vessels in cases of aneurism: and, as far as my information of the general result of the cases in which this operation has been tried, they support these conclusions; particularly the case operated on by Sir William Blizard.

*Excision of the Tumour.*—"This is an operation which I think should on no occasion be attempted; as, although in some cases it might possibly succeed, yet, as the chances against it are so great—as the event of those operations performed by the French surgeons, and others on the Continent, so clearly prove—I am of opinion, that, in such extreme cases, the ligature of the arteries should be tried in preference."

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## VII. MIDWIFERY.

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*Case of Rupture of the Uterus, in which Gastrotomy was successfully performed; related by DR. L. FRANK, Physician to the Archduchess Maria Louisa.\*—*Angela Grossi, of Parma, aged 44, had borne five children, and had reached the ninth month of her sixth pregnancy, without the occurrence of any accident. On the morning of the 9th of August, 1817, labour commenced; and whilst standing up, she was seized with a faintness, accompanied by vomiting. She was therefore placed on her bed by the assistance of her husband and the midwife. At that moment she stated that she experienced a feeling of laceration in the abdomen, and also a sensation of there being two children. A surgeon, who was called in, asserted that the effort of vomiting had carried the child upwards, adding that another might propel it downwards, and advising the patient to remain quiet.

The midwife, however, remarking that the abdomen swelled, that the vomiting did not cease, and that the breathing became irregular, called in Dr. G. Rossi. On examination, he detected a rupture of the uterus; and on consultation with his father, and other medical men, it was unanimously resolved to have recourse to gastrotomy.

Two hours after the occurrence of the accident, the operation was performed by Professor Cecconi, in the left hypogastric region, precisely at the point where the feet of the child were felt. When the incision was made, the child presented with the feet, and was extracted alive, together with the secundines. No bad symptoms are alluded to, and it is stated that the patient was

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\* Omodei, Annali, Gennajo. 1825.



perfectly recovered forty days after the operation. Three years afterwards she had a seven month's child, which lived a fortnight. After her recovery, a ventral hernia presented itself in the situation of the cicatrix, which, though irremediable, was not productive of much inconvenience.

*Remarks.*—It will be remarked, that the history of the above case, as related by Dr. Louis Frank, is deficient in some most important particulars. Not to mention others, he has omitted to state whether any attempt at delivery by the vagina was made, or whether the endeavours for that purpose proved unavailing.

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### VIII. MEDICAL JURISPRUDENCE.

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*A Case of true Uterine Pregnancy, lasting upwards of three Years*, by G. J. PENKER, District Surgeon, Lungbunzlau, in Bohemia.\*—A woman, aged 27, though very weak and much emaciated, in the month of October, 1820, had all the symptoms of pregnancy. About the middle of the fifth month she began to feel the motions of the child, and at the end of the ninth, felt the precursory pains of labour. A surgeon, who was called, found the pains weak, and the os uteri not much dilated, though sufficiently so to allow him to feel that the vertex presented. In consequence of the extreme weakness of the patient, she was treated with permanent and diffusible stimulants, and with so much advantage, that at the end of six weeks she had regained the appearance of health, and had returned to her ordinary occupations. A few days after the coming on of the pains, the motions of the child became weaker, and at last gradually ceased. The size of the belly diminished, and the child appeared to be turned to the left side. The menses appeared in the tenth month, and returned regularly afterwards. In December, 1821, M. Penker was called in consultation, and advised forcible delivery, which was not consented to. In October, 1822, he found the os uteri above the symphysis pubis, inclined obliquely half an inch to the right side, with the fundus to the left. The posterior surface of the uterus, rendered as thin as a double sheet of paper by the pressure of the head of the child, had descended very low in the pelvis, so as not to be farther than an inch and a half from the orifice of the vagina. The back and feet of the child could be felt through the abdomen. Such was the state of the patient in March, 1823, up to which time she had refused to

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\* Allg. Medic. Annalen. Sept. 1824.

submit to any operation. The relator of the case promises to give the sequel at some future period.

*Remarks.*—Although this case is described as a uterine pregnancy, there are some circumstances connected with it sufficient to suggest a doubt on that point. If not extra-uterine, there is every probability that it is an instance of retroversion, continuing through the whole period of pregnancy, an occurrence often mistaken for the real extra-uterine case, as has been fully proved by Dr. Merriman, in his ingenious essay on the subject.—*Translator.*

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## IX. MISCELLANEOUS.

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*Biographical Notice of Giuseppe Flajani, Professor of Surgery,* by DR. FRANK, Physician to the Archduchess Maria Louisa.\*—The subject of this memoir was born in 1741, near Ascoli, where he commenced his studies. In 1755, he went to Rome where he continued until he graduated in 1761; he was then admitted in the capacity of student into the Hospital of Sto. Spirito, and remained so until 1769, when he was appointed an assistant surgeon, after having given the required proofs of his acquirements. In the same year he was charged with the task of collecting and arranging an anatomical cabinet, for the instruction of students. The preparations contained in it are numerous; among the principal are some very beautiful injections; a dissection of the whole system of nerves in an adult; similar dissections of the blood-vessels; many pathological specimens, of which some are described in his works; and, lastly, a collection of urinary calculi, which, from the number and importance of its contents, may be considered as one of the most valuable in Europe. In 1772 he was elected principal surgeon, and lecturer on operative surgery; afterwards Director of the Anatomical Museum, and then Lithotomist, having particularly attended to that subject. In 1775 he was chosen surgeon in ordinary to Pius VI; and became an associate to many societies; those of Sienna, Vienna, Manheim, Gottingen, Genoa, Florence, Naples, Bologna, Lucca, &c.

He died, August 1, 1808, aged 67, and highly esteemed by all who knew him, for his knowledge and his virtues. He left three sons, of whom the first applied himself to the study of medicine, and, by the wish of his father, made, at a great expence, a three years' tour through the civilized parts of Europe; on his return to Rome, fortune did not smile on him; his merits were over-

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\* Omodei. Annali. Giugne.

looked and neglected; he died soon afterwards, of the effects of chagrin, at Spoleto, where he was principal physician: the third son followed the footsteps of his father, and has obtained most of his appointments, including that of Director of the Anatomical Museum of the Hospital Sto. Spirito, which he has increased, and continues to increase in value and extent.

The first work that Flajani published was a translation of Potts' Treatise on Fractures and Dislocations. In 1786, he published his "*Nuovo Metodo di Medicare alcune malattie spettanti alla Chirurgia.*" 4to. Roma. It contains two historical eulogies on Professor C. Guattani and P. M. Giavina, together with four dissertations; one on aneurisms of the lower extremities; another on fracture of the clavicle; another on rupture of the patella; and the last on the use of camphor to superficial ulcers. Another of his works was "*Osservazioni pratiche sopra l'Amputazione degli articoli, le invecchiate lussazioni del braccio, &c.*" 8vo. Roma, 1791. In 1798 he began to make known the results of his long practice, in his "*Collezione di Osservazioni e riflessi di Chirurgia.*"—(*Vide Quart. Jour. For. Med. Vol. 3.*) This work, in four volumes, includes almost every surgical subject. Some other unpublished dissertations of his composition remain in the possession of his son. He had begun, and was only prevented by death from publishing, a treatise on lithotomy, which he intended should have been of the most comprehensive kind. In fact, he had refrained from noticing this subject in his other works, intending to reserve his copious observations for the one in question. Another work which he had contemplated, and for which he had collected materials, was a treatise on the origin of the venereal disease, the importation of which from America he disbelieved. This opinion rested entirely on the evidence of authors contemporary with the discovery of the New World, and many, as Torella and others, who had treated of the disease before that period.

# INDEX

TO

## ANDERSON'S QUARTERLY JOURNAL.

VOL. II.—NEW SERIES.

---

### A.

- Absorption of the neck of the Thigh-bone, by B. Bell, 140  
 A. B., on Phreology, 121  
 Acupuncture, on the galvanic phenomena of, by Pelletan, 428  
 Anderson's Case of Irritative Fever, 270  
 Adhesions and false Membranes, by M. Scoutetten, 131  
 Adelon's, M. Physiology of Man, 89  
 Ainslie, Dr. W., Pathology of Sporadic Cholera, 637—on the Cholera Morbus of India, 462  
 Allan's pathological and operative Surgery, 325  
 Alison's pathology of Scrofulous Disease, 276  
 Amenorrhœa, cases of, by Dr. Hosack, 463  
 Analysis of Medical Evidence, by Dr. G. Smith, 329  
 Anatomy, Manual of, by Meckel, 423  
 Anatomical Systems, by Parry, 623  
 ——— Manual, by Florman, 423  
 Anatomia Universa, by Paul Mascagni, 41  
 Anatomy of the Brain, Viscera, &c. 262  
 Anderson's, M., Operation for applying a Ligature, 134  
 Andral's Case of Inflammation of the Thoracic Canal, 273—pathology of the Chest, 226—case of Obliterated Thoracic Duct, 281  
 ——— M. jun., on Dyspnœa, 143  
 Animal Heat, by M. Disprez, 268  
 Antomarchi's Plates, 116  
 Arsenic, case of poisoning by, by M. Orfila, 306  
 Arteries, illustration of, 626—on the Muscularity of, by Mr. Mackenzie, 266—  
 ——— large, tying to prevent inflammation of, 653  
 Artificial Palates, by J. Snell, 135  
 Averill's operative Surgery, 248  
 Azais', M., View of Physiology, 633

### B.

- Bampffield's Pathology of the Spine, 272  
 Bang on Sympathy between the Heart and Liver, 268  
 Beclard, Professor, on Ulcer in the Stomach, 636  
 Beck's, Dr., Case of trial and conviction for Murder, and pardon in proof of Insanity, 471  
 ——— Medical Jurisprudence, 152, 334—by Dunlop, 161  
 Belcher's Case of Enlarged Tonsils, 288  
 Bell, Mr. C., on the Physiology of the Nerves, 372  
 ——— Mr. Benjamin, on the Interstitial Absorption of the Neck of the Thigh-bone, 140  
 Bellingeri on the Spinal Marrow, 263  
 Berard's, M., Case of Tubercular Diseases of the Brain, 634  
 Billard, M., on the Intestinal Mucus Membrane, 529  
 ——— Case of Partial Paralysis of the Face, 639  
 Blood-letting, by Dr. Coates, 292  
 Blood, on the Composition of, by M. Lassaigue, 633—Experiments on, by Westrumb, 428  
 Bogros, M., on the Structure of the Nerves, 625  
 Bones, Anatomy of the, by Scarpa, 258  
 Boyle's Treatise on Syphilis, 215  
 ——— Treatise on Moxa, 211  
 Brachet on the Convulsions of Infants, 378  
 Brachial Fascia, on, by Dr. Godman, 424  
 Brandreth's Case of Hydrophobia, 441

Brain, softening of, by M. Recamier, 132—Plates of, by Lizars, 258—Hypertrophia of, by M. Scoutetten, 272—Tubercular Diseases of the, by M. Berard, 634  
 Bronchocele, Treatment of, by Holbrook, 657  
 Bye-law of the College of Physicians, 476

## C.

Calvert on the Rectum and Anus, 51  
 Cancer, on the Use of Belladonna in, by Dr. Cooke, 292  
 Cancerous Duodenum, Case of, by Dr. Irwin, 278  
 Capsular Ligament, Case of Fracture of, by Mr. A. Robertson, 139  
 Capillaries, on the action of, by Mackenzie, 266  
 Carmichael on Venereal Diseases, 291  
 Cerebellum, the Preparation of, for Dissection, by M. Reil, 622  
 Chest, Pathology of the, by M. Andral, jun. 226  
 Chevreux, M., on Cholesterine in the Bile, 129  
 Children, on the Management of, by Dr. Kennedy, 291—Diseases of, by Dr. Dunglison, 83  
 Cholera Morbus, by Dr. W. Ainslie, 462  
 ——— Post Mortem appearance of, by Mr. Scot, 642  
 Cholesterine in the Bile, by M. Chevreux, 126  
 Cicatrization of an Ulcer in the Stomach of the late Professor Beclard, 636  
 Citric Acid, used in Uterine Hæmorrhage, by M. Gorat, 298  
 Cinchona Bicolorata, Italian Experiments on, 653  
 Circulation of Blood, by Hopley, 628  
 Civiale's, M., method of destroying Urinary Calculi, 647  
 Clever's Operation of Lithotomy upon himself, 289  
 Clinical Reports, by Lovati and Bigeschi, 93  
 Cloquet's, M., Case of Ophthalmia cured by Acupuncture, 458  
 Clutterbuck on Fever, 656  
 Comparative Anatomy, by Oken of Copenhagen, M. Geoffroi St. Hilaire, &c. 116  
 Conspectus of Prescriptions in Medicine, Surgery, and Midwifery, &c. including the new French Medicines, 152, 309  
 Cooper, Sir Astley, on the Principles and Practice of Surgery, by Tyrrell, 47  
 Copland's, Dr., Notes to De Lys's Richerand, 157  
 ——— Notice of our Criticisms of his edition of De Lys's Richerand, 309  
 Cress's Case of Poisoning by Opium, 294  
 Coates on Blood-letting, 292  
 Collin, M., on Diseases of the Chest, 634  
 Convulsions, Case of, treated by injecting Tartar Emetic into the Veins by M. Meplain, 296—of Infants, by Bruchet, 378  
 Cooke on Belladonna in Cancer, 292  
 Croup and Hooping Cough, by Guibert, 355  
 Cruveilheir on Trachea and Bronchia, 117  
 Cuckoo, Hairs in the Stomach of, 116—Experiments on, by Dr. Gaspard, 129  
 Curvature of the Spine, by Dr. Jarrold, 186

## D.

Davis's, Dr., Elements of Operative Midwifery, 576  
 Dawson's Nosological Practice, &c. 142  
 Defermon, M., on the section of the Pneumogastric Nerves, 627  
 Delpech on the best mode of Lithotomy, 137  
 ———'s Amputation of the Hip-Joint, 135  
 Dermott's Illustration of the Arteries, 626  
 Despretz on Animal Heat, 268  
 Digestion, by Thackrah, 148  
 Distortions of the Spine, by Shaw, 460  
 Diseased Ovaria, on the extraction of, by Mr. Lizars, 465  
 Dod's, Dr., on Rotated Spine, 3  
 Dropsies, Report on, by Venables, 141—207  
 Drops of Blood, mode of detecting, by Lassaigue, 466  
 Dunglison on the Diseases of Children, 83  
 Dyspnœa, two Cases of, by M. Andral, 145

E.

- Essay on Instinct, by Dr. Hancock, 119  
 Expectorated Matter, characteristics of, by M. Nanche, 429  
 Extirpation of the Uterus, by Professor Palletta, 148  
 Experiments, by Ficinus and Prinz, on the injection of Air into the Veins, 628  
 Eye-ball, Case of Medullary Sarcoma of the, by Dr. Pockel, 451

F.

- Face, Paralysis of the, by M. Billard, 639  
 Fever, by Dr. Clutterbuck, 656—Pathology of, by Dr. Hosack, 268  
 Felici, Dr., on Retention of Urine, 150  
 Ficinus and Prinz on the injection of Air into the Veins, 628  
 Flajani on the Tensor Tarsi Muscle of the Eye, 423  
 ——— Giuseppe, Biographical Notice of, by Dr. Franks, 663  
 Florman's Anatomical Manual, 423  
 Forbes, Dr., on the Use of the Stethoscope, 14  
 Frank's Biographical Notice of Guiseppe Flajani, Professor of Surgery, 663

G.

- Gastrotomy successfully performed for Rupture of the Uterus, by Dr. Frank, 661  
 ——— by Lizars, 283  
 Gaspard's Experiments on the Cuckoo, 129  
 General Penitentiary, Diseases of, by Dr. P. M. Latham, 291  
 Generation, Experiments on the Organs of, by Rolando, 631  
 Genito-Urinary Organs, on the Diseases of, by M. Lallemand, 445  
 Giponton's, M., Case of Pericarditis, 439  
 Godman, Dr., Precautions for Dissecting, 425  
 ——— on the Introduction of the Straight Catheter, 456  
 ——— on the Brachial Fascia, 424  
 ——— Case of Hernia, 437  
 Gonorrhœa, on the use of Iodine in, by Dr. Henry, 293  
 Gooch, Dr., on Uterine Hæmorrhage, 151  
 Good's, Dr., Study of Medicine, 460—508  
 Gorat's, M., Case of Citric Acid in Uterine Hæmorrhage, 298  
 Gout, on the use of Colchicum in, by Dr. Scudamore, 291  
 Gräfe's Extirpation of a Sarcomatous Tumour, 282  
 Guibert on Croup and Hooping Cough, 355

H.

- Hairs in the Stomach of the Cuckoo, by M. Carus, 116  
 Hancock, Dr., on Instinct, 119  
 Heart, Rupture of, by Mr. Thomas, 277—on the Action of, by Wiltbank, 427  
 ——— and Liver, sympathy between, by Dr. Bang, 268  
 Hebb's Case of Poisoning by Oxalic Acid, 133  
 Hemorrhoids, Case of the Excision of, by Dr. Johnson, 457  
 Henry, Dr., on Iodine in Gonorrhœa, 293  
 Hernia, Case of, by Dr. Godman, 437  
 Hensler's, M., Physiological Anatomy, 633  
 Hip-Joint Amputation of, by M. Delpech, 135  
 Holbrook on Hydrocele, 459  
 ——— on the Treatment of Bronchocele, 657  
 Holscher's, Dr., Case of Extirpation Uteri, 463  
 Hopley on the Circulation of the Blood, 628  
 Hosack's Pathology of Fever, 268  
 ——— Cases of Amenorrhœa, 463  
 ——— on Ergot in Uterine Hæmorrhage, 297  
 Hydrocele, by Holbrook, 459  
 Hydrophobia, Case of, by Dr. Brandreth, 441—Case of, by Dr. Renwick, 443

I.

- Iliac Artery, Mr. Anderson's Operation on the, 134  
 Inflammation, by M. Villermé, 271  
 Influenza, Dr. Stoker's account of, 142  
 Intestinal Mucus Membrane, by Billard, 529

- Iodine, on the Danger of, by M. Zinc, 148  
 Irritative Fever, Case of, by Mr. Anderson, 270  
 Irwin's Case of Cancerous Duodenum, 278  
 Italian Experiments with *Cinchona Bicolorata*, 653  
 J.
- Jarrold on Curvature of the Spine, 186  
 Johnson's, Dr. James, Case of a Partial Paralysis, 640  
 ——— Case of a Tympanitic State of the Pericardium, 436  
 ——— Case of the Excision of Hemorrhoids, 457  
 K.
- Kennedy on the Management of Children, 291  
 L.
- Lallemand, M., on the Diseases of the Genito-Urinary Organs, 445  
 Latham, Dr., on the Millbank Penitentiary, 291—384  
 Lassaigue's Mode of detecting Spots of Blood, 166  
 ——— on the Composition of Venous and Arterial Blood, 633  
 Lithotomy, performed upon himself, by M. Clever, 289—the best mode of, by M. Delpech, 137—by Mr. Liston, 646  
 Liston, Mr., on Lithotomy, 646  
 Lizars' Case of Gastrotomy, 283  
 ——— Anatomical Plates of the Brain, 258  
 ——— on the Extraction of Diseased Ovaria, 465  
 Lovati and Bigeschi's Clinical Reports, 93  
 Lower Jaw, Amputation of, by Mr. McClellan, 286  
 Lyttæ, Case of in a Rabid Dog, 640  
 M.
- Mackenzie on the Muscularity of the Arteries, 266  
 McClellan's Case of Amputation of the Lower Jaw, 286  
 Maitland's, Dr., Case of Styphyloma cured by Tapping, 459  
 Majendie on the Insensibility of the Nerves of the Senses, 427  
 ——— on the Olfactory Nerves, 428—Explained by Mr. C. Bell, 119  
 Manly, Dr., on Menstruation, 465  
 Marochetti on Sublingual Pustules, 129  
 Mascagni's *Anatomia Universa*, 41  
 Medical Jurisprudence, by Beck, 152—334—by Dunlop, 161  
 ——— Chemistry, Elements of, by Dr. Paris, 407  
 ——— Doctrine, by M. Michu, 193  
 Medico-Chirurgical Education, on, by Turner, 141  
 Michu's Medical Doctrine, 193  
 Midwifery, respectability of Practitioners in, 304  
 Morgagni's Unpublished MSS. 324  
 Moxa, Treatise on, by Boyle, 211  
 Mucus Membrane of the Bronchiz, irritation distinguished from inflammation in, by M. Nauche, 129  
 N.
- Nauche, M., on Irritation, &c. 129  
 ——— on the Characteristics of Expectorated Matter, 429  
 Nerves, on the Structure of, by M. Bogros, 625—On the Physiology of, by Mr. C. Bell, 372  
 Nerves of the Senses, Insensibility of, by Magendie, 427  
 New French Medicines, 474  
 O.
- Oesterlen's Case of a foreign Body expelled from the Trachea, 447  
 O'Halloran on Ophthalmia and Remittent Fever, 171  
 Oken and Geoffroi St. Hilaire's Anatomy, 116  
 Olfactory Nerves, Essay on the, by Majendie, 119, 428  
 Operative Surgery, by Averill, 248  
 ——— Midwifery, by Dr. Davis, 576  
 Ophthalmia and Remittent Fever, by O'Halloran, 171  
 ——— Cured by Acupuncture, 458

# INDEX.

V

- Opium, Poisoning by, Treatment of, 140—Case of Poisoning, by Dr. J. C. Cress, 294
- Orfila's Case of Poisoning by Arsenic, 306
- Osteo-Sarcoma, Case of Mr. Rogers, 652
- P.
- Pathological Observations on the Rotated or Contorted Spine, by Dr. Dods, 3
- Pardon for Murder, on proof of Insanity, by Dr. Beck, 471
- Parry's, Dr. Elements of Pathology and Therapeutics, 320
- Posthumous Medical Writings, 463—477
- on Anatomical Systems, 623
- Paris's Pharmacologia, 308
- Elements of Medical Chemistry, 407
- Paralysis, Partial, by Dr. Johnson, 640
- Pathological Observations, by Dr. Stoker, 103
- Pathological and Operative Surgery, by Mr. Allan, 325
- Penker's, Dr., Case of true Uterine Pregnancy lasting upwards of three years, 662
- Pied's, M., Case of Pericarditis, 440
- Pericardium, Dr. James Johnson's Case of, 436
- Pericarditis, Case of, by Giponton, 439—Case of, by Pied, 440
- Penitentiary, Millbank, Disease of the, by Dr. Latham, 334
- Pneumogastric Nerves, by Defermon, 627
- Pelletau on the Galvanic Phenomena of Acupuncturation, 428
- Precautions for Dissecting, by Dr. Godman, 425
- Plates, by Antomarchi, 116
- Phlegmasia Dolens, Pathology of, by M. Velpeau, 132—Case of, 644
- Phrenologists and the Frontal Sinus, 261
- Phrenology, Strictures on, by Rolph, 262—by A. B. 121
- Physiology, View of, by M. Azais, 633
- of Man, by M. Adelon, 89
- Physicians' Bye-Laws, 476
- Physic and Physiology, Nosological Practice of, by G. P. Dawson, 142
- Poisoning by Oxalic Acid, Case of, by Hobbs, 133—by Opium, by Dr. Staat, 461
- Posthumous Medical Writings, by Dr. Parry, 463—477
- Pockel's Dr., Case of Medullary Sarcoma of the Eye-ball, 451
- Pregnancy lasting three years, Case of, by Dr. Penkers, 662
- complicated with Ascites, by Scarpa, 298
- Prout, Dr., on the Urinary Organs, 598
- Purulent Ophthalmia, by Dr. Ryan, 285
- R.
- Rape, Case of, by Metaxa, 467
- Recamier's Case of Softening of the Brain, 132
- Rectum and Anus, Treatise on, by G. Calvert, surgeon, 51
- Reil, M., on the preparation of the Cerebellum for Dissection, 622
- Renwick's Case of Hydrophobia, 443
- Retention of Urine, combined with Anasarca, by Dr. Guiseppe de Felici, 150
- Richerand, Notes to, by Dr. Copland, 157
- Robertson's, Mr. A., Case of Fracture, 139
- Rogers, Case of Osteo-Sarcoma, 652
- on tying large Arteries to prevent Inflammation, 650
- Rolando's Experiments on Generation, 631
- Rolph on Phrenology, 262
- Ryan on the Purulent Ophthalmia of Infants, 285
- S.
- Sarcomatous Tumours, Extirpation of, by Dr. E. Gräfe, 282
- Semi-Decussation of the Optic Nerve, by Dr. Wollaston, 127
- Scot's Account of Post Mortem Appearances in the Cholera of India, 612
- Scoutetten's Case of Hypertrophia of the Brain, 272
- on Adhesion, &c. 131
- Scarpa on the minute Anatomy of the Bones, 258
- on Pregnancy, complicated with Ascites, 298



Scrofulous Disease, by Dr. Alison, 276  
 Scudamore, Dr., on Colchium for Gout, 291  
 Shaw's, Mr., Supplement to his Work on Distortions of the Spine, 460  
 Smith's, Dr. G., Analysis of Medical Evidence, 339  
 Snell on Artificial Palates, 135  
 Spine, Pathology of, by Mr. Bampfield, 274  
 Spinal Marrow, by Dr. Bellingeri, 283  
 Sporadic Cholera, Pathology of, by Dr. Ainslie, 637  
 Spleen, by Dr. Stearns, 632  
 Study of Medicine, by Dr. Good, 508—460  
 Stearn, Dr., on the Spleen, 632  
 Single Vision, by Dr. Wollaston, 128  
 Staat's, Dr. B. P., Case of Poisoning by Opium, 461  
 Straight Catheter, introduction of, by Dr. Godman, 456  
 Stethoscope, on the Use of, by Dr. Forbes, 14  
 Stoker's, Dr., Pathological Observations, 103  
 ——— Account of the Influenza, 142  
 Soares's Case of Lyttæ in a Rabid Dog, 640  
 Sublingual Pustules in Hydrophobia, 129  
 Surgery, Practice and Principles of, by Sir A. Cooper, 47  
 Syphilis, Treatise on, by Boyle, 215  
 ——— on, by Wellbank, 570

## T.

Tensor Tarsi Muscle, by Flajani, 423  
 Thackrah on Digestion, 148  
 Therapeutics, Elements of, by Mr. Parry, 320  
 Theoretical and Practical Compendium of Medicine, by Dr. Uwins, 290  
 Thomas's Case of Rupture of the Heart, 277  
 Thoracic Canal, Inflammation of, by M. Andral, 273  
 ——— Duct, Case of, by M. Andral, 281  
 Tonsils Enlarged, Case of, by Dr. Belcher, 288  
 Trachea and Bronchia, Anatomical Structure of, by Cruveilhier, 117  
 ——— a Foreign Body expelled from, by Osterlen, 447  
 Treatment of Uterine Hæmorrhage, by Dr. Gooch, 151  
 ——— of Poisoning by Opium, 140  
 Turner on Medico-Chirurgical Education, 141

## V.

Velpéu's, M., Pathology of Phlegmasia Dolens, 132—Case of, 614  
 Venables' Clinical Report on Dropsies, 141—207  
 Venereal Diseases, second edition, by Carmichael, 291  
 Villermé on Inflammation, 271

## U.

Unpublished MSS. by Morgagni, 324  
 Urinary Calculi, method of destroying, by Civiale, 617  
 Uteri extirpated, Dr. Holscher's Case of, 463  
 Uterine Hæmorrhage, by Dr. Hosack, 297  
 Uterus, Extirpation of, by P. Palletta, 148  
 Uwins' Compendium of Theoretical and Practical Medicine, 290

## W.

Wellbank on Syphilis, 570  
 Westrumb's Experiments on the direct passage of Substances into the Blood, 428  
 Wiltbank on the Action of the Heart, 427  
 Wollaston on the Optic Nerve, 127  
 ——— on Single Vision with two Eyes, 128

## Z.

Zinc, M., on the Danger of Iodine, 148<sub>j</sub>







